

MANUFACTURERS' RECORD

A Weekly Southern Industrial and Hardware Newspaper.

VOL. XIV. No. 9
WEEKLY.

BALTIMORE, OCTOBER 6, 1888.

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Report of the AQUEDUCT Commissioners.

[NEW CROTON AQUEDUCT, NEW YORK.]

AN ELABORATE VOLUME, CONTAINING AUTHORITATIVE TABLES BY THE CHIEF ENG., B. S. CHURCH. JUST ISSUED.

PLANT (by actual count from Table 13.)

Number of Ingersoll Drills used..... 242

Number of Drills of all other kinds used..... 103

PROGRESS (by actual figures from Table 8.)

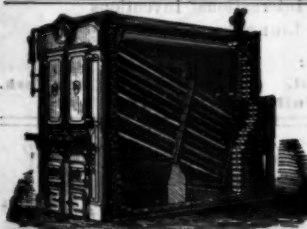
Average weekly progress in best 10 headings that used Ingersoll Drills exclusively (omitting all idle ft. works)..... 38.73

Average weekly progress in best 10 headings that used other drills exclusively (omitting all idle weeks)..... 31.68

DIFFERENCE OF 20 PER CENT. IN FAVOR OF INGERSOLL DRILLS.

All headings where Ingersoll Drills were used exclusively have been completed. Send for description of Aqueduct, with Engineers' Tables of Progress and Catalogue. Sent free.

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W. H. SMITH, Eng., 44 & 46 South Canal St., Chicago, Ill.
A. S. FISKE, Eng., 44 Johnston Building, Cincinnati, O.
A. S. FISKE, Eng., 24 Curoy Exchange, Minneapolis, Minn.
T. B. PACKER, Sheddley Building, Kansas City, Mo.
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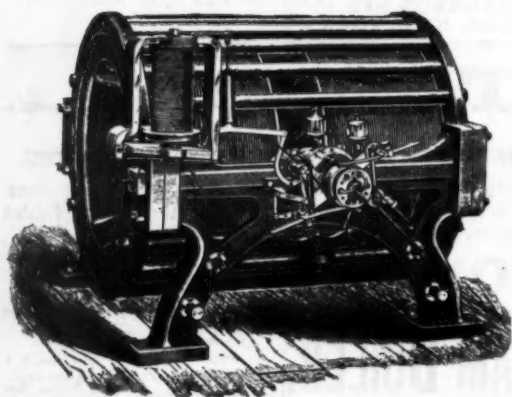
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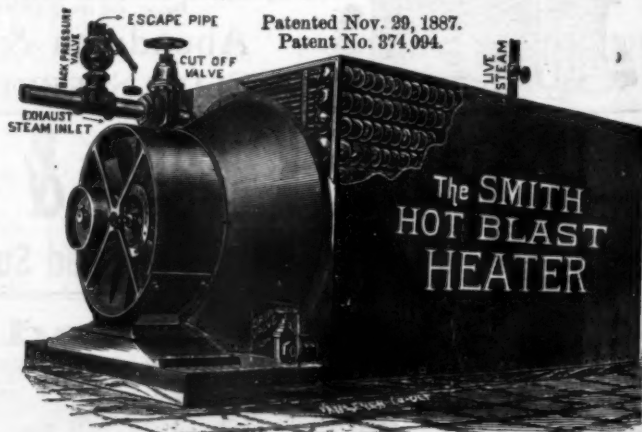
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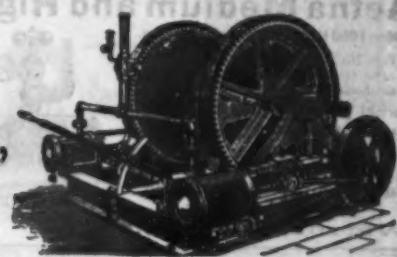
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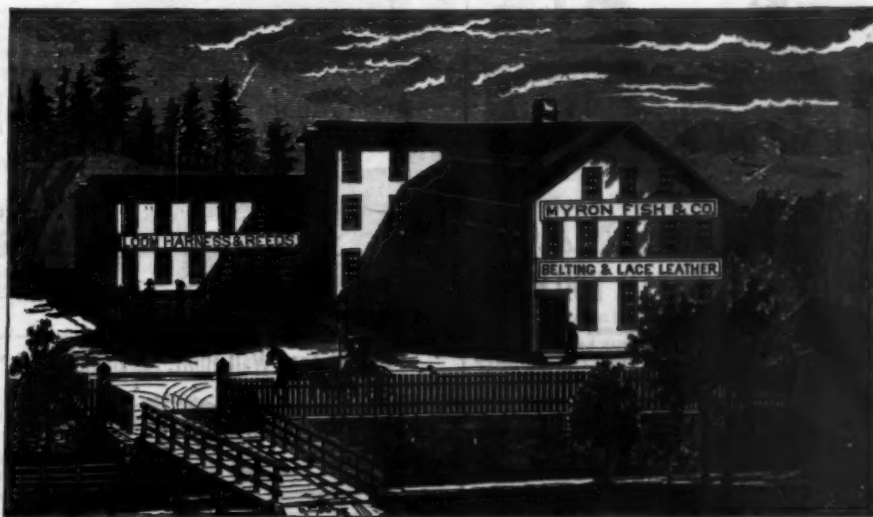
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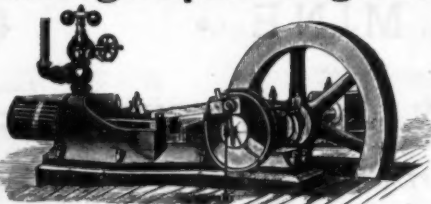
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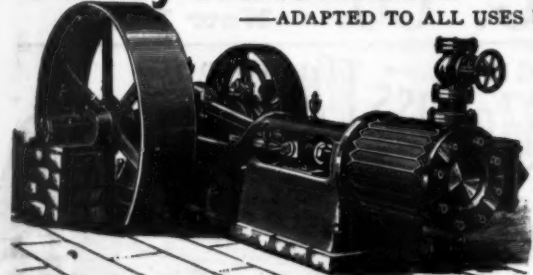
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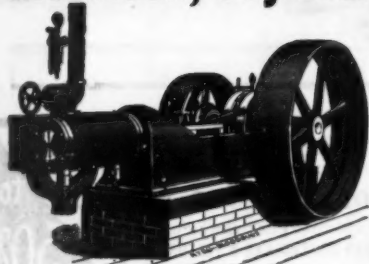
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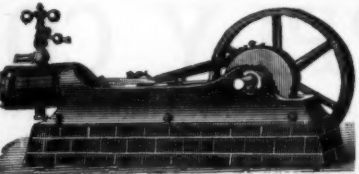
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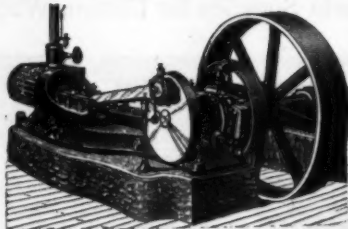
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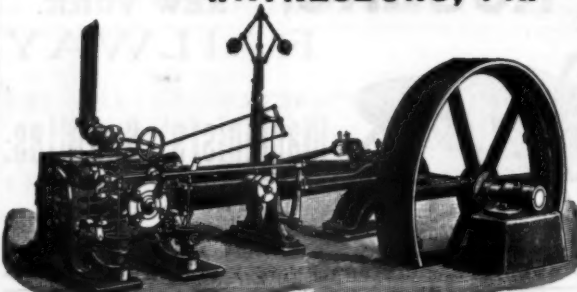
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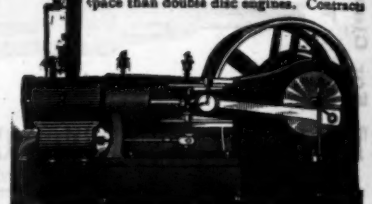


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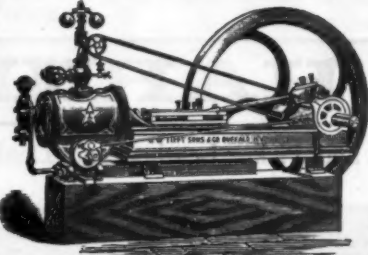
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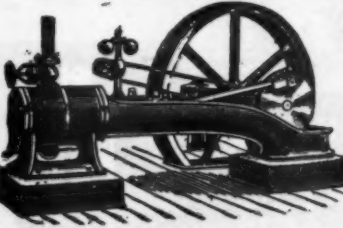
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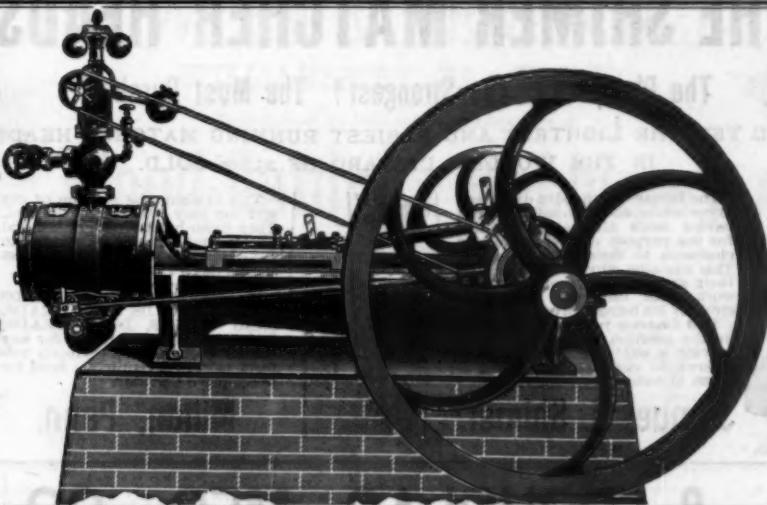
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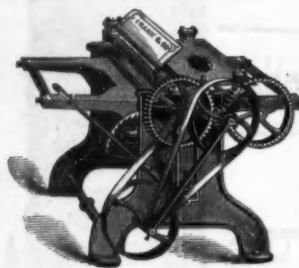
This machine, for variety and range of work, has no equal, and for workmanship it has no superior. It will be found very valuable for builders of Locomotives, Portable and Stationary Engines and Pumps, Machine Tool Builders and General Machine Shops, as work can be done to better advantage and with greater precision than on Planers, Lathes, Shapers, etc. It is designed for Boring, Facing, Turning, Milling, Profiling, Key-Sem-ing, Splining, Rack Cutting (any length), Gear Cutting with the Vertical Attachment up to six (6) feet in diameter, etc. **Weight, 6,000 Pounds.** Smaller sizes of this machine are built. Circulars with full particulars on application.

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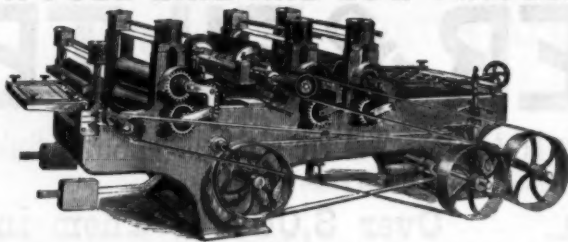
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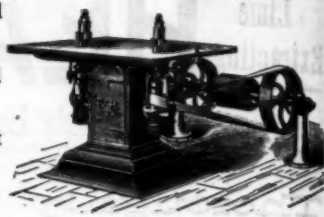
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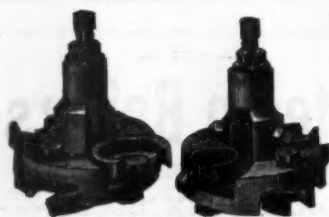
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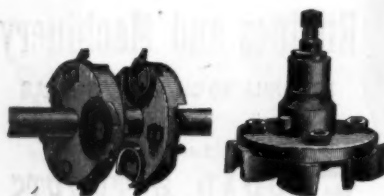
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The Bits are arranged in upper and lower series, and secured to a Head having seats alternately inclined for the purpose of giving the side clearance to their cutting points. This explains why these Bits hold their shape and turn out standard work until used up; the entire circle of Bit being tool cutting edge. This diagram represents a Bit (D) in the position it occupies when making a cut; the Bit (C) which follows to complete the work, is given in outline.

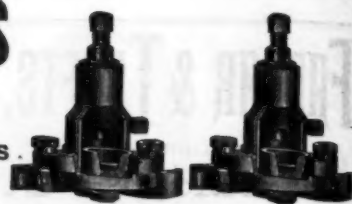


This explains the division of cut and the easy working of the tool. They finish hard, cross-grained and knotty lumber neatly, showing clean cut edges, and often save their cost in one day's run.

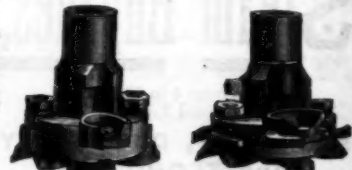
We also make SHIP-LAP HEADS JOINTER HEADS, DADO HEADS, SASH HEADS, DOOR HEADS, COPE HEADS, and Heads for any special work where a perfectly uniform pattern is required. Send for Descriptive Circular.

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DOOR HEAD.



SASH HEAD.

KINGSLAND & DOUGLAS MFG. CO.

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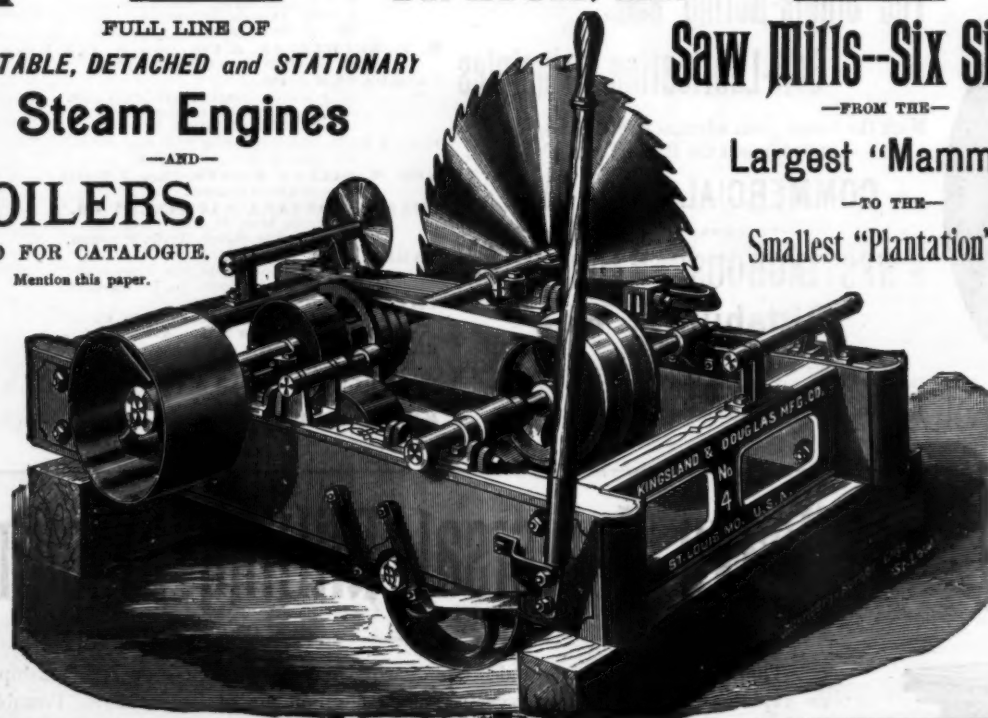
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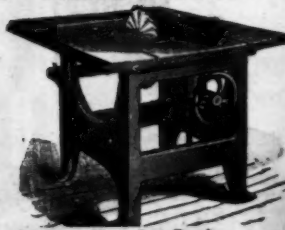
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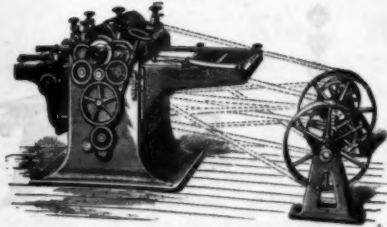
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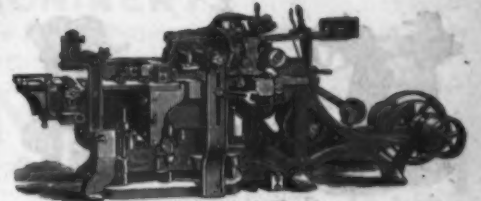
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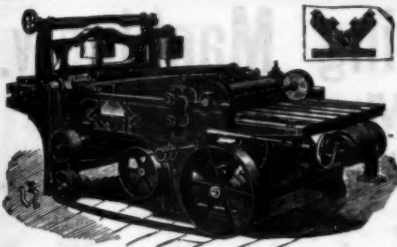
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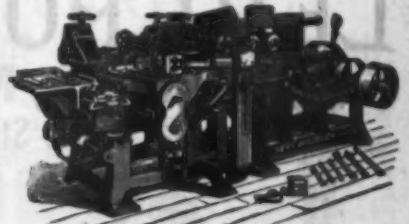
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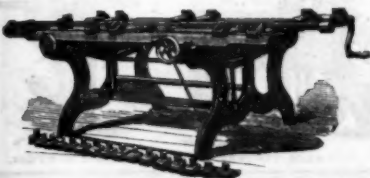
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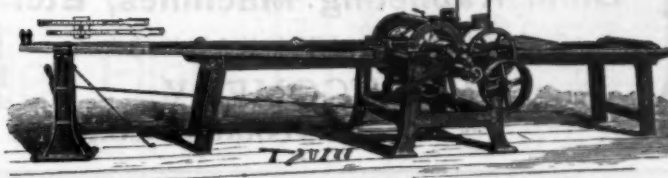
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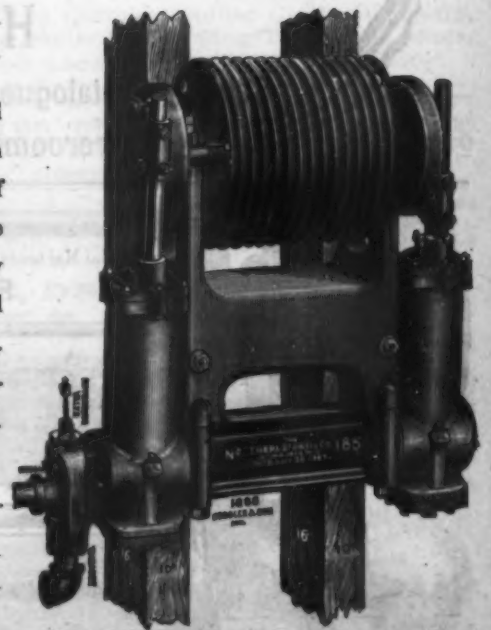


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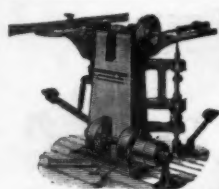
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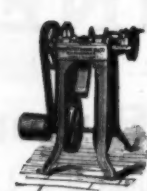
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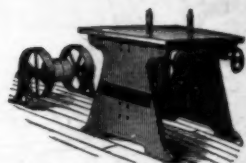
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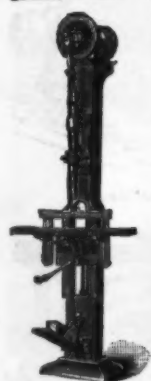
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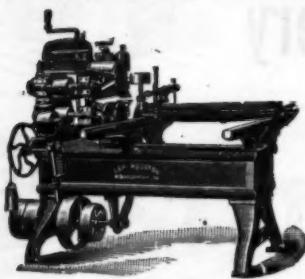
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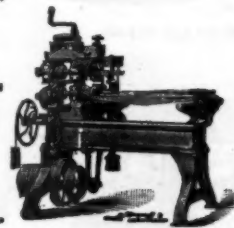
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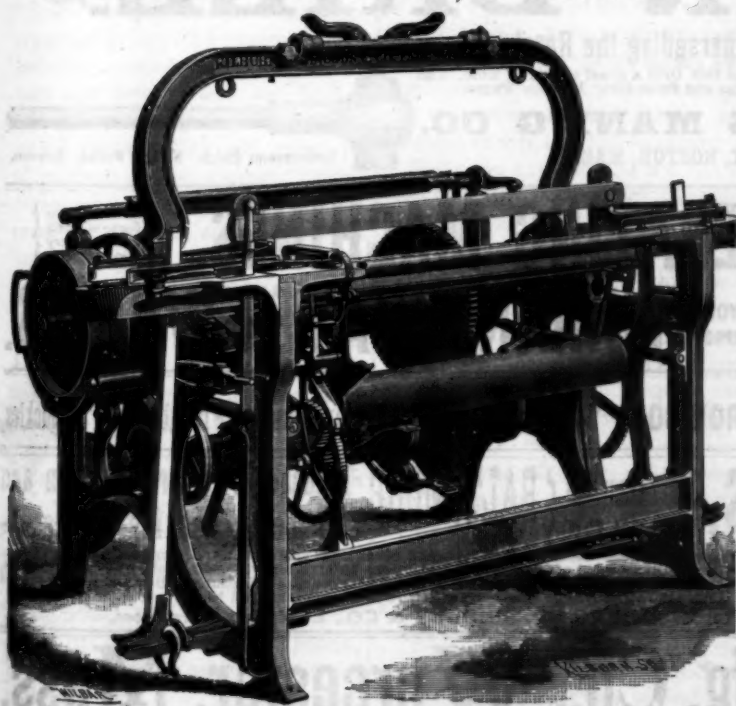
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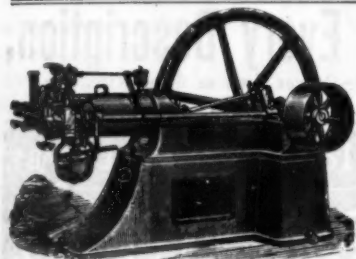
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If you desire to purchase machinery of any kind consult our advertising columns, and if you cannot find just what you wish, send us particulars as to the kind of machinery needed. We will make your wants known free of cost, and in this way secure the attention of machinery manufacturers throughout the country. You will thus get all information desired as to prices, etc.

Southern Enterprise.

A very remarkable illustration of the spirit which animates the South and of the enterprise of the people of this section has been given in the manner in which "Trusts" are handled. We believe that only two "Trusts" of any special importance organized to control business interests centering exclusively in the South have ever been formed, and both of them have been practically defeated by the determination and enterprise of Southern people, while of "Trusts" organized in other sections we cannot recall the defeat of any single one of note.

The American Cotton Oil Trust, an offshoot of the great Standard Oil Co., was organized to monopolize the cotton-seed oil business. Before the public was aware of what was being done, this "Trust" had secured the control of almost every first class cotton oil mill in the South, and its monopoly seemed complete. Like the Standard Oil Co. in Pennsylvania, the American Cotton Oil Trust was bent upon an absolute control of every branch of the trade, and, backed by the vast wealth of its parent, it looked to many as though it was useless to fight it. The South, however, did not so regard the matter, and just when its control seemed most absolute and a fight against it most hopeless, a young Carolinian, who had made a wide reputation as an engineer, planned and organized in connection with his friends a \$5,000,000 company to build independent

oil mills. Within a few months from its formation this company had eight of the best cotton oil mills ever built in full operation, located at points where they could best compete with the mills of the "Trust." The monopoly was broken and the South was saved from the danger of having this great industry controlled by one company, which could force prices of seed down and of oil up at its own good pleasure. Millions of dollars were saved to the planters by this successful fight against the first great "Trust" which threatened Southern prosperity.

The jute bagging Trust was so skillfully planned and so ably managed that not until the cotton crop was beginning to move was its existence realized. Its organizers felt safe. They knew that the cotton must be bagged promptly and sent to market, and they boasted of what they were going to do in the way of advancing prices. To attempt to fight this "Trust" by bringing out a substitute for jute bagging in time for the present crop was apparently worse than useless. It would only lead to delay in shipping cotton and to still higher prices for bagging. Planters were advised to submit with the best grace possible this year in hopes that before another season rolled around a remedy for the evil would have been found. This advice, however, was not taken. Instead of that the whole South was bent upon defeating the "Trust" at the very start, and many have been the devices brought out to accomplish it. Practically the "Trust" is dead. Substitutes even better than jute have been found. As already known to our readers the Lane Mills, of New Orleans, and the Acme Manufacturing Co. have produced bagging, one from low grade cotton and one from pine straw, which meet all the requirements and which are destined to supplant jute bagging.

Night and day the mills will run to meet the demand for this bagging, and thus from what seemed a curse has sprung the blessing of two new industries in the South which will add several million dollars a year to Southern prosperity. In these facts can be seen the spirit of energy and enterprise which is building up the South and planting new industries everywhere, overcoming obstacles that would appall others and pressing steadily forward, undaunted by difficulties. The South is at work and its people are desperately in earnest, so "Trusts" had better shun this section.

THE Belden Machine Co., of New Haven, Conn., under date of September 22, write: "The satisfaction derived from our advertisement in the **MANUFACTURERS' RECORD** far surpasses our expectations." The Belden Co. are large dealers in machinists' tools, machine work, iron, steel and copper drop forgings, power hammers, crank planers, &c.

The South's Glorious Future.

The more the sayings of Judge Kelley, as reported by Frank G. Carpenter in last week's **MANUFACTURERS' RECORD**, are studied, the more highly will the wisdom of his suggestions and of his forecast of the future of the South be appreciated. Aside from the calm philosophical discussion of other subjects that give interest and importance to the interview, there is in one paragraph food for earnest thought. Judge Kelley says: "When the present local and scattered development of the South shall give place to such developments as Mr. Cowlam suggests, not only will Southern manufactures be consumed at home, but they will need to be vastly increased and of a character of more highly finished product, and it will take the surplus of the North to supply Southern demand. Southern manufactures to day are largely based upon local conditions favoring cheap production, but without local demand, and this forces their product into Northern markets, whereas a more general development, based upon the building of such railroads as would connect the wealth of the mountain wildernesses of the South with its valleys, and its existing railway system, and thus, with all portions of the country, would lay a foundation for such diversity and magnitude of mining and manufacturing industry in the South as would at once diversify Southern agriculture."

The foregoing is not the dream of a visionary, but the prediction of a venerable sage who has for more than half a century studied causes and effects in the United States. When he entered upon public life there were no States west of the Great Lakes, Chicago was an Indian trading post, and the Mississippi river was the frontier. All the farms, the manufactories, the great cities and towns, and the accumulated wealth they represent had no existence. The most fervid imagination could never have conceived of the wonderful march of civilization that has overspread half the continent within fifty years, and created a wealth far greater than the aggregated accumulations of the entire country in 1850. The same causes that produced this tremendous development have begun to affect the South, and will continue their beneficent work until every part of it shall feel and be profited by them. So reasons Judge Kelley. He goes further and asserts that there "never existed in the West, nor in any other portion of the country, anything like the natural wealth of the South," and he therefore expects that industrial progress and the consequent increase of wealth will be even more rapid there than it was at the West, and that this will at once diversify Southern agriculture, and increase the profits of those engaged in it.

Judge Kelley reasons from true premises. They are facts, not theories, upon which his prophecies of the

South's glorious future are based. First is the admitted natural wealth; second, "the enormous energies, the plant that, having done its work in the West, is now seeking a new field of investment, and there is no spot on earth sufficient for it and within its reach but the South;" third, the drift of Northern immigration from the West to the South, which has already assumed considerable proportions, is adding to its intelligent industrial population, and will in time supply all the trained skill required for the production of the more highly finished goods of every kind that the South now buys from the North and West. In other words, the entire North, from ocean to ocean, has accumulated such vast wealth that its capitalists are compelled to seek new fields for its profitable employment, and there is no other in the world so convenient or so certain as in the South. Some have already been convinced of this and have invested largely in Southern enterprises, but they are only the forerunners of the many that will follow their example. But one thing can interfere with the present prosperity and glorious future of the South. Of that, Judge Kelley says: "Free trade with foreign nations, or a lowering of our tariff to permit successful foreign competition with our industries, would be as disastrous to the North to-day as the war was to the South, and it would stop Southern development and ruin her new industries. It would not last long, but a year of it would undo the work of 20 years. For this reason it will not come about." In the foregoing the **MANUFACTURERS' RECORD** most cordially concurs. Whatever danger there may have been of a radical change in the economic policy of the United States has, we believe, been happily averted by the general discussion of the past 10 months, and now leading statesmen of all parties are agreed that no changes shall be made in our tariff laws that would "permit successful foreign competition with our industries." Judge Kelley has the best of reasons therefore for his declaring that free trade with foreign nations "will not come about," and as nothing else can possibly interfere with the general prosperity, the **MANUFACTURERS' RECORD** joyfully congratulates the South upon the glorious future, the light of whose dawn already illumines it.

MR. E. L. MORSE, of Philadelphia, manufacturer of brass tube feed-water heaters and purifiers, in renewing his subscription, writes: "While the **MANUFACTURERS' RECORD** and myself continue to live, there will be no separation."

MANAGERS of mills, factories, furnaces, mines, etc., and parties starting manufacturing enterprises, and needing machinery or supplies of any kind, will find it profitable to consult the advertising columns of the **MANUFACTURERS' RECORD**. Its pages contain names of the best houses in the country among manufacturers of and dealers in machinery and mill supplies.

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A LARGE INCREASE OVER 1887 AND 1886.

The nine months which have just ended have marked a very important period in the industrial history of the South. The great boom of 1887 brought into existence many gigantic land companies and many iron, coal and other companies, organized for the development of the South. The boom in real estate, and the speculative fever which it engendered, was looked upon with fear by many who anticipated financial trouble when the reaction came. As the calm inevitably follows the storm, so the excitement in real estate and in the organization of enterprises partly based upon real estate, has been succeeded by a period of depression in land values, with comparatively few sales. Instead of bringing disaster, as many had feared, the South has gone steadily forward, its great enterprises pushed to completion and new ones, large and small, organized in great number. Here and there the decline in real estate has temporarily retarded the progress of some new enterprise, but as the dull season is now closing, to be followed by a period of activity, due in part to the abundant crops and in part to the universal prosperity of Southern manufactures, we may look for a revival of many projects now held in abeyance, and the projection of hundreds of others. Nothing could better have demonstrated the thorough soundness of the industrial growth of the South, than the way in which all business interests have stood the tight money market and the real estate depression which followed the boom. The capitalists of the North have closely studied these matters, and we venture the prediction that their faith in the continued progress and prosperity of the South is greater to-day than ever before.

Never before in the history of the South was the outlook brighter than it is now. The immense furnaces and rolling mills, car works, cotton mills and kindred enterprises, upon which work was commenced from twelve to eighteen months ago, and which during all that time have been virtually locking up the capital in vested in their construction, are now, one after another, rapidly going into operation. Moreover, they are beginning their careers as wealth producers at a most auspicious time, when the demand for all their products is active, with prices yielding a good margin of profit. Soon they will be taking the crude material and turning out millions of dollars worth of finished product to help enrich the South. The corn crop, the second in importance in the South, has made another advance, and the total reaches 533,000,000 bushels, the largest amount ever produced by the South, being 41,000,000 bushels greater than in 1887, and 100,000,000 bushels greater than in 1884, only five years ago. The yield of cotton is yet somewhat uncertain, but doubtless that will be but little, if any, less than the splendid crop of 1887, while prices will probably average higher, as the world's consumption of this staple is now so enormous as to cause a steady decline in the stock. Railroad construction is active, and the heavy investments of foreign and Northern capital in the improvement of old roads and the building of new ones attest the faith of the world at large in the truth of Judge Kelley's glowing predictions of the South's great future as given in the last issue of the MANUFACTURERS' RE-

CORD. From Maryland to Texas progress is the order of the day, and when the political excitement is over and the crops are harvested then we may look for a period of wonderful activity in all lines of industry.

The MANUFACTURERS' RECORD has repeatedly called attention to the increasing diversity of the industrial growth of the South. Small enterprises of all kinds are springing up in every direction, and year by year the South is increasing its production of many articles for which it has heretofore been dependent upon other sections. An examination of the recent industrial growth of that section will show how rapidly this is going on. In Atlanta a \$500,000 company is preparing to supply a large part of the Southern demand for sewing machines. Glass factories in Alabama and Georgia have proved that the South can make its own glass. Car works in twenty or twenty-five places and locomotive works in Richmond and Roanoke demonstrate that the South can make its own cars and locomotives at a lower cost than they can be made for in the North or West. Furniture and carriage factories all over the South are beginning to supply the home demand, while canning factories are saving hundreds of thousands of dollars to the South. No where else in all the world is the raw material for almost every line of manufacture so abundant as in the South, and scarcely a week passes without some industry entirely new to this section being organized to turn this raw material into wealth, while of enterprises in established lines of industry many are daily started. As illustrating the increasing diversity of the new enterprises we give the following comparison, showing the number organized during the first nine months of each of the last three years:

	First nine months of 1888.	1887.	1886.
Iron furnace companies.....	15	26	8
Machine shops and foundries.....	101	80	56
Agricultural implement factories.....	12	17	8
Farm mills.....	114	98	71
Cotton mills.....	59	59	9
Furniture factories.....	55	41	19
Car works.....	23	29	10
Water works.....	73	65	21
Carriage and wagon factories.....	53	32	12
Electric light companies.....	122	53	23
Mining and quarrying enterprises.....	361	444	114
Lumber mills, including saw and planing mills, sash and door factories, stove factories, &c.....	626	512	369
Ice factories.....	46	76	49
Canning factories.....	211	60	11
Store foundries.....	4	3	5
Brick works.....	128	141	16
Miscellaneous iron wks., roll'g mills pipe wks., &c.....	35	36	11
Cotton compresses.....	23	15	3
Cotton-seed oil mills.....	3		
Miscellaneous enterprises not included in foregoing.....	853	754	312
Total.....	9,948	7,594	3,175

Here is an increase in the first nine months of this year of 358 new enterprises compared with the same time 1887, and of 1,767 compared with the same time 1886.

Basing our calculations upon returns received directly by the MANUFACTURERS' RECORD, amply authenticated and verified, and in the case of incorporated companies, compared with the official reports of the State officers, we find that during the first nine months of 1888 the amount of capital, including capital stock of incorporated companies, represented by the new manufacturing and mining enterprises organized or chartered at the South, aggregates about \$121,415,000. It is of course true that with many of these companies the actual cash investment is not so large as the amount of their capital stock; but there are many small manufacturing enterprises, portable saw mills, small grist mills, gineries and similar small industries, costing from a few hundred to a thousand dollars, that are not included in this list. The aggregate cost of these would be very considerable and partly, though not wholly, offset the too great capitalization of some incorporated companies. In addition to these, every manufacturing enterprise is constantly adding here and there a new piece of machinery, which in the aggregate is very great; but we take no account of that, only including cases where a mill

is greatly enlarged, remodeled, or other extensive improvements made.

Summing up the amount of capital and capital stock represented by our list of new enterprises and the enlargement of old plants for the first nine months of 1888, we have:

	First nine months of 1888.
Alabama.....	\$ 9,939,000
Arkansas.....	6,500,000
Florida.....	2,945,000
Georgia.....	9,383,000
Kentucky.....	22,101,000
Louisiana.....	5,259,000
Maryland.....	6,059,000
Massachusetts.....	1,591,000
North Carolina.....	5,254,000
South Carolina.....	3,350,000
Tennessee.....	8,840,000
Texas.....	14,835,000
Virginia.....	8,929,000
West Virginia.....	5,703,000
Total.....	\$121,415,000

In the following list we give the name, location and character of business of the new enterprises organized during the three months ended September 30, 1888, and existing establishments rebuilt (after being burned) or enlarged, having given in our issues of March 31 and June 30 the list for the first six months of the year:

ALABAMA.		
LOCATION.	NAME.	BUSINESS.
Allens Factory.....	J. R. Phillips.....	Flour Mill.
Anniston.....	South's Smelt & Red Co.....	Smelting Works.
Anniston.....	Chas. Taylor & Sons.....	Double Fire Brick Works.
Anniston.....	Bosworth & McElwee.....	Broom Factory.
Anniston.....	U. S. Rolling stock Co.....	Enlarge Rolling Mill.
Anniston.....	J. C. Long.....	Planing Mill.
Ball Play.....	Savage Bros.....	Saw Mill.
Bessemer.....	Little Belle Iron Co.....	Furnace.
Bessemer.....	Bessemer Iron & Steel Co.....	Furnaces (2).
Bessemer.....	Bessemer Rolling Mill Co.....	Enlarge Mill.
Birmingham.....	A. H. Nunnally.....	Sash and Door Factory.
Birmingham.....	Pioneer Min. & Mfg. Co.....	New Furn. and Roll. Mill.
Birmingham.....	Clock Lumber & Mfg. Co.....	Lumber.
Birmingham.....	Evarts & Co.....	New Water Works.
Birmingham.....	Moore & Co.....	Brick Works.
Birmingham.....	Mary Lee Coal & Ry. Co.....	Coal Mining, &c.
Birmingham.....	Hart-Wood Switch Co.....	Railroad Switches, &c.
Birmingham.....	Williamson Iron Co.....	Improved Furnace.
Birmingham.....	East Birm. Furniture Co.....	Furniture Factory.
Birmingham.....	East Birm. Corrugating Co.....	Enlarge Works.
Bluffton.....	Bluffton Iron Ore Co.....	Ore Mining.
Candlen.....	Benderson & Co.....	Fishing Mill.
Candlen.....	Patrick Crum.....	Sugar Mill.
Cent'l Institute.....	H. J. Davis, Jr.....	Machine Shop.
Clanton.....	R. E. Euman.....	Saw Mill.
Cordova.....	Cordova Coal Co.....	Coal Mining, &c.
Cropwell.....	Stone & Co.....	Grist Mill & Gin.
Decatur.....	American Oak Extract Co.....	Double Works.
Decatur.....	U. S. Rolling Stock Co.....	Holt and Nut Works.
Demopolis.....	Marengo Mfg. Co.....	Stave Factory.
De Sotoville.....	J. S. Taylor.....	Brick Works.
Dudley.....	Southern Mining & Trns. Co.....	Coal Mining.
Eufaula.....	R. Mouthrop.....	Brick Yard.
Faunsdale.....	J. H. Minge.....	Gin.
Florence.....	Serage & Reynolds.....	Saw & Planing Mill.
Florence.....	M. K. Hunt.....	Saw Mill.
Florence.....	A. L. Rock.....	Carriage Factory.
Florence.....	Coleman Cotton Gin Co.....	Gin Factory.
Florence.....	D. M. Wilson.....	Shoe Factory.
Florence.....	Hardware Factory.....	Hardware Factory.
Fort Deposit.....	Evarts & Co.....	Gin.
Gadsden.....	J. H. Lovjoy.....	Pottery.
Gadsden.....	Williams & Huffer.....	Mining.
Girard.....	Trunk Factory.
Goodwater.....	F. G. Colby.....	Carriage & Buggy Factory.
Goodwater.....	Branchon & Banks.....	Grist Mill.
Greenville.....	Greenville Red Cedar & Co.....	Double Factory.
Huntsville.....	Wyneth City Canning Co.....	Canning Factory.
Huntsville.....	Sample Lumber Co.....	Enlarge Mill.
Hull.....	A. Blocker & Co.....	Grist Mill & Gin.
Hull.....	H. Wright.....	Gin.
Huntsville.....	Bowling & Sugg.....	Enlarge Ice Factory.
Jacksonville.....	Jacksonville Min. & Mfg. Co.....	Iron Furnace.
Jacksonville.....	J. A. Gaboury.....	Ochre Mining.
La Fayette.....	J. M. Trammell & Co.....	Remodel Flour Mill.
Mobile.....	K. M. Townsend.....	Cotton Compress.
Mobile.....	Gulf Dry Dock Co.....	Dry Dock.
Montgomery.....	Capital City Ice Co.....	Enlarge Ice Factory.
Montgomery.....	Montgomery Oil Works Co.....	Improved Electric Works.
Old Spring Hill.....	J. S. Ryall.....	Saw Mill.
Opelika.....	John Bros.....	Foundry.
Ragland.....	Hardy.....	Coal Mining.
Russellville.....	Enoch Enley.....	Flour Ore Mining.
Russellville.....	H. Stone.....	Ore Mining.
Seale.....	D. W. Ingram.....	Gin.
Seddon.....	W. N. Robinson.....	Saw & Grist Mill.
Seddon.....	Empire Lumber Co.....	Saw Mill.
Selma.....	Thos. K. Gatchell.....	Broom Factory.
Selma.....	Stanford & Sons.....	Boiler Works.
Sheffield.....	Memphis & Charleston R.R. Machine Shops.....	Machine Shops.
Snowdon.....	Calloway.....	Cr. amery.
Spring Garden.....	F. W. Formby & Stewart.....	Ore Mining.
Spring Hill.....	C. M. McDougal.....	Brick Works.
Spring Hill.....	Lewis.....	Saw Mill.
Summersville.....	Stave & Barrel Factory.
Sycamore.....	Chas. & Allison.....	Planing Mill.
Talladega.....	Ala. Graphite Mining Co.....	Enlarge Graphite Mining.
Talladega.....	C. Wallis.....	Sash & Door Factory.
Talladega.....	Crane and others.....	Stamp Mill.
Tampa.....	Frank Eastman.....	Planing Mill.
Thomasville.....	Wagon & Carriage Factory.
Troy.....	Minchener & Knox.....	Planing Mill & Spoke Fac.
Troy.....	Folinas & Sons.....	Fer. Factory & Pottery Works.
Tuscaloosa.....	Cribbs Brick & Tile Co.....	Fire Brick & Pottery Works.
Warrior.....	Warrior Lumber Co.....	Lumber Mill.
Warrior Stat'n.....	Warrior Coal & Coke Co.....	Enlarge Plant.
Wetumpka.....	Thos. Williams.....	Gin.

ARKANSAS.

Alma.....	Alma Can. & Evapor'g Co.....	Canning Factory.
Antimony.....	U. S. Antimony Co.....	Add. Machinery.
Argenta.....	Little Rock Oil Comp. Co.....	Enlarge Mill.
Arkansas City.....	Ky. & Ark. Land & Indus. Co.....	Cotton Compress, &c.
Arkansas City.....	Arkansas City Gas Co.....	Electric Light Works.
Augusta.....	White River Hedge Co.....
Batesville.....	Batesville Medicine Co.....	Patent Medicines.
Batesville.....	N. J. Landrum.....	Foundry & Machine Shop.
Batesville.....	Blair Manganese Mining Co.....	Mining.
Bear.....	Sand Rock Gold Mfg. Co.....	Mining.
Bentonville.....	John M. Withrow.....	Cider & Vinegar Factory.
Cabot.....	Neely.....	Gin.
Clarendon.....	Carner.....	Stave Factory.
Devalis' Bluff.....	Bufton Lumber Co.....	Saw Mill.

LOCATION.	NAME.	BUSINESS.
Elkins	Elkins Mercantile & Roll- er Mill Co.	Flour Mill.
Elkins Springs	B. E. Woodruff & Son	Saw Mill.
Fayetteville	J. W. Massengale	Flour Mill.
Fayetteville	Fayetteville Rotary Har- row & Vehicle Co.	Agricultural Implements, &c.
Fort Smith	Borden City Soap Co.	Box Factory.
Hackett City	Kansas & Texas Coal Co.	Enlarge M. alog.
Harrison	Bower & Sons	Carriage Factory.
Helena	Moline Lumber Co.	Planing Mill's (s).
Hood	Elkins Roller Mill Co.	Grist Mill.
Hopkins	Hope Lumber Co.	Planing Mill.
Huntington	Kansas & Texas Coal Co.	Mineral.
Leffers	Ouchita Coal Co.	Tile Factory.
Little Rock	Silver & Lead Mining Co.	Mineral.
Little Rock	Star Broom Works	Broom Factory.
Little Rock	Little Rock Furniture Co.	Furniture Factory.
Little Rock	E. C. Wehrfridt	Enlarge Machine Shop.
Little Rock	D. P. Ottensmeyer	Text Factory.
Little Rock	Little Rock Electric L. Co.	Enlar. Elec. Light Works.
Little Rock	Little Rock Paint Co.	Enlarge Factory.
Little Rock	Little Rock Water Co.	Enlarge Plant.
Little Rock	Bes. Mang. Min. & Furn. Co.	Mineral & Furnace.
Little Rock	Little Rock Edison Elec.	Electric Plant.
Little Rock	Little Rock Ice Co.	Ice Factory.
Little Rock	J. W. Vestal	Pottery.
Little Rock	Little Rock Automatic Car	Car Compls.
Little Rock	Little Rock Chair Co.	New Factory.
Marianna	E. F. Friend	Gin.
Marianna	Frank Trunkery	Plan. Mill & Sash Factory
Marianna	L'Anguille Lumber Co.	Enlarge Mill.
Marzo	Paragould Copperage Wks.	Enlarge Factory.
Paragould	Paragould Poutnell & Dorsey	Flour Mill.
Pettigrew Mill	E. L. Colburn	Gin.
Pine Bluff	J. F. & R. Hicks	Gin.
Pocahontas	Frank Turpening	Brick & Tile Works.
Prairie Grove	J. T. Mitchell	Flour Mill.
Rogers	A. Bernard & Co.	Brick Yard.
Russellville	M. Brand	Gin.
Sims	Avery Gin Co.	Gin.
Springdale	Springdale Canning Co.	Canning Factory.
Tonawanda	Wm. E. Jacob	Gin.
Vineyard	Philis & Chandler	Gin.
Warren	Bailey, Sherriff & Co.	ISaw Mill.
Watson	A. Young	Grist Mill & Gin.
Yellville	Yellville Mining Co.	Mineral.

FLORIDA.

Aucilla	J. F. Devine	Gin.
Brooksville	Brooksville Canning Factory.	Canning Factory.
Charlotte Harb.	B. J. Edwards	Tank Factory.
Fairbanks	W. L. Finger	Brick Yard.
Harbor View	De C. ater	ISaw Mill.
Jacksonville	Joe. Marryick	Tub & Bucket Factory.
Jacksonville	Samuel Wolfe	Cigar Factory.
Key West	Phillis	Pile Preserving Factory.
Key West	Key West Water Sup'y Co.	Water Works.
Lombard	Fia. Produce Mfg. Co.	Canning Factory.
Longwood	A. J. Sheets	Box Factory.
Marysville	Frank W. Hall	Wood-Working Factory.
McDavid	John T. Miller	Saw Mill.
Monticello	Brooksville	Brick Yard.
Orlando	Geo. E. Macy	ISaw Mill.
Penacola	M. H. Sullivan and others	Ship Yard.
Sanford	K. H. Herndon	ISaw Mill.
Sanford	Sanford Gas Co.	Enlarge Plant.
Sorrento	W. H. Wadsworth	ISaw Mill.
Southland	Insular River Lanning Co.	Canning Factory.
Starke	J. T. Fewkes	Grist Mill & Gin.
Starke	G. P. Young	Saw & Plan'g & Grist Mill.
St. Augustine	Cook & Libby	Brick Works.
Tarpon Springs	Fred. Kauter, manager	Ice Factory.

GEORGIA.

Albany	Albany Edison Illu. Co.	Electric Light Works.
Albany	Levin Bros.	Gin.
Americus	B. F. Nysewander	Wood-Working Factory.
Americus	Dr. J. W. Jones Med. Co.	Patent Medicines.
Athens	J. H. Ruck	Ice Factory.
Athens	S. Lyndon	Foundry.
Athens	J. H. Kucker	New Cotton Compress.
Athens	Joseph M. Smiler	Enlarge Fertilizer Factory
Atlanta	Pemberton Medicine Co.	Patent Medicines.
Atlanta	Bro. J. Sew. Mach. Mfr. Co.	Sewing Machines.
Atlanta	A. O. Smith	Chemical Works.
Atlanta	O. D. D. Co.	Chemicals, &c.
Augusta	Augusta Brew ng Co.	Brewery.
Augusta	The Southern Pa Crusta	Manufacturing.
Augusta	Decorative Co.	Decorative Co.
Augusta	Wm. Donovan	Saw & Planing Mill.
Augusta	Augusta Gas Co.	Enlarge Works.
Austonia	Water Works	Enlar. Water Works.
Augusta	Matthew Rice	Bobbins Mill.
Barnesville	Farmers' Oil & Fert. Co.	Cot. S' Oil Mill & Fer. Fy.
Barnesville	Barnesville Mfg. Co.	Cat. a Mill.
Bremen	A. D. Turner & Guthrey	Brick Yard.
Bremen	New & Miller	Sash & Door Factory.
Brookfield	S. Harrel & Co.	Saw & Plan'g M. I.
Brumby	Brumby Light & Water Co.	Electric Light Works.
Brumby, nr.	Launus Cotton Gin &	Phosphate Mining.
Buena Vista	Cotton Mfg. Co.	Cotton Mill.
Cabless	J. E. wats	Mill & Gin.
Canton	Etowah Gold Mining Co.	Gold Mining.
Canton	J. A. Dewar	Maible Mill.
Canton	Channell & Jones	Brick Yard.
Canton	Turk	Brick Yard.
Carrollton	Ernest & Green	Saw Mill.
Cartersville	Endora Min ng Co.	Mineral.
Cartersville	R. M. & G. L. Pattillo	Mineral.
Cartersville	Peter & Boardman Water	Water Works.
Cartersville	& Gas Association	Water Works.
Cartersville	Clark Robinson	Dynamite Factory.
Cartersville	McLain	Chair Factory.
Cartersville	Wills	Planing M. I.
Cartersville	Cartville Steel & Furn. Co.	Furnaces (s).
Cartersville	Cartersville Imp. Gas &	Gas, Elec. L't & Wtr. Wks.
Cartersville	J. P. Davis	Barrel Factory.
Cartersville	Williams & Montgomery	Planing Mill.
Cartersville	J. T. Morris and others	Broom Factory.
Cedartown	Georgia Ming & Furn. Co.	Furnace.
Cedartown	Cedartown Lumber Co.	Sash & Door Factory.
Cedartown	L. J. Wagener	Water Works.
Cedartown	P. L. County Mining Co.	Ore Mining.
Cedartown	Camp & Co.	Planing Mill.
Cedartown	W. C. Morris	Mill.
Chapel Hill	Du Pre & Bonam	Spoke & Handle Factory.
Chestnut Flat	A. W. Alfred	Grist Mill & Gin.
Cohutta	W. R. Morrison	Ore Min ng.
Collier	F. F. Wilson	Gin.
Columbus	Columbus Railroad Co.	Machine Shop.
Columbus	Monumental Steam Mar-	Enlarge Marble Works.
Columbus	Golden Bros.	Enlarge Machine Shop.
Columbus	Queen Cider & Vinegar Co.	Vinegar Factory.
Columbus	James Bros.	Plan. Mill & Sash Factory
Cuyler	C. W. Johnson & Farmer	Quarry.
Co dele	Peterson & Perry	Planing Mill.
Cordale		Cotton Compress.
Curlewville	Eaves	Brick Yard.
Dallas	Dallas Cotton Mills	Cotton Mill.
Dalton	Campbell & Co.	Chair Factory.
Dalton	Findley & Virming	Machine Repair Shop.
Dalton	Thoms-Hous'n El. L. Co.	Electric Light Works.
Dalton	Empire Mills	Saw Mill.
De West	W. J. Goodwin	Chair Factory.
Eastman	W. W. Eastman	Saw Mill.

LOCATION.	NAME.	BUSINESS.
Ellaville	Chappell Murray	Gin.
Fayetteville	Orrick Deasley	Saw Mill.
Fish	Thos. J. Cowan	Chair & Planing Mill.
Flowers Branch	Flow. Bch. Chair Mfg. Co.	Chair Factory.
Fort Valley	S. F. Dasher	Saw & Planing Mill.
Gainesville	Atlantic Min. & Coas. Co.	Stamp Mill.
Gainesville	Herald Publishing Co.	Printing, &c.
Gainesville	J. L. Hudson	Wagon Factory.
Gainesville	G. P. Boone & Bro.	Furniture Factory.
Georgia	Carnegie P'n Min. & Mfg. Co.	Mineral, &c.
Grayville	Grayville Min. & Mfg. Co.	Ice Factory & Broom Fac.
Grayville	Gray's Min. & Mfg. Co.	Gin.
Greenville	F. M. Ledbetter	Wood-Working Factory.
Greene County	F. Dean & Thompson	Ore Mining.
Griffin	Griffin Light & Water Co.	Electric Light Works.
Hamlet, near	Atlanta Lime & Cement Co.	Lime Works.
Hawlet	F. M. Randall	Ore Mining.
Harlem	C. H. Flury	Brick Yard.
Hinesville	Hinesville Water Works Co.	Water Works.
Hogansville	A. H. Thompson	Gin.
Harrison	W. C. Fulghum	Mill & Gin.
Jewells	Brown, Jewell & Co.	Add. Cotton Mill Mach'y.
Kennesaw	T. J. Hardage & Co.	Barrel Factory.
Kingston	Gaines & Lewis	Remodel Flour Mill.
La Fayette	Chattanooga Ore Co.	Ore Mining.
La Grange	C. C. Jones	Gin.
La Grange	La Grange Oil Mill & Mfg. Co.	Electric Light Plant.
La Grange	Wm. S. Cox	Enlarge Flour Works.
Lime Branch	Dupoister & Taliferro	Increased Capital.
Lost Mountain	John A. Dobbin	Saw Mill.
Louisville	A. N. Beach	Mill.
Lovjoys		Fertilizer Factory.
Macon	Macon Gas Lt. & Water Co.	Electric Light Plant.
Macon	Macon Oil & Fertilizer Co.	Enlarge Oil Mill.
Macon	Brady Crofting Mfg. Co.	Patent Medicines.
Macon	Macon Autom. Refrig'g Co.	Refrigerator Works.
Macon	Brady & Chappell	Crocker Factory.
Macon	Covington & Macon R. R.	Machine Shop.
Macon	Macon Knitting Co.	Additional Machinery.
Madison		Cot. S' Oil Mill & Fer. Fy.
Mershon	A. J. Dickson	ISaw Mill.
Midville	J. J. Rountree	Saw Mill.
Midville		Ice Factory.
Midville	Jas. B. Hough	Gin.
Midville	Albion Co. Mining Co.	Mineral.
Midville	Coweta Fertilizer Co.	Double Factory.
Midville	Newnan Buggy Co.	Buggy Factory.
Midville	Newnan	Enlarge Oil Mill.
Midville	McBride & Co.	Double Shingle Mill.
Midville	Everett & Boyle	Ore Mining.
Midville	Oglethorpe Co.	Brick Works.
Midville	D. B. Cade	Brick Works.
Midville	Parker's Store	Shall Creek Mfg. Co.
Midville	Powder Springs	Shall Creek Mfg. Co.
Midville	Pulaski	J. E. Booth
Midville	Reynolds	Richmond Cotton Mills.
Midville	Richmond	Richmond Factory.
Midville	Rockmart	W. H. Pearce
Midville	Rockmart	The Rockmart Co.
Midville	Rome	D. W. Curry Co.
Midville	Rome	Gelt Ridge Mining Co.
Midville	Sandersville	Satie al Vulcanite Co.
Midville	Savannah	Fert. & Co.
Midville	Savannah	S. F. Sholer & Co.
Midville	Savannah	Savannah Guano Co.
Midville	Savannah	Mutual Gas Light Co.
Midville	Stockbridge	Stockbridge Mfg. Co.
Midville	Surrey	J. J. McDonough & Co.
Midville	Tallapoosa	H. D. Hutchison & Sons
Midville	Tennille	Hilton & Overstreet
Midville	Tennille	Stephens Bros.
Midville	Toccoa	Wm. Campbell
Midville	Toccoa	T. S. Day
Midville	Toccoa	H. H. Owen
Midville	Toccoa	Stone-Cutting Mill.
Midville	Toccoa	Trion Mfg. Co.
Midville	Ty-Ty	W. E. Williams
Midville	Ty-Ty	J. L. Ford
Midville	Winerville	T. B. Winter
Midville	Woodbury	Oak Mount Variety Works
Midville	Woodbury	J. T. Gilbert

KENTUCKY.

Ashland	Williams & Henderson	Enlarge Furniture Factory
Ashland	Mexican I n Co.	Mineral, &c.
Ashland	Chicago Lumber Co.	Saw & Plan'g Mill.
Ashland	Doune & Miller	Carriage Factory.
Augusta		Electric Light Works.
Blairstown	R. M. Shelton	Flour Mill.
Bonnieville	Whee r & Wheeler	Flour Mill.
Bowling Green	Alexander & Muhlen	Vinegar Factory.
Buffalo	Morris & Co.	Flour Mill.
Cadir	Jefferson & Joe	Flour Mill.
California	Shipp & Morris	Flour and Grist Mill.
California	J. H. Hines	Brick Works.
California	& Coal & Lumber Co.	Brick Works.
Cerulean Spgs.	Thom. A. Penn	Tobacco Factory.
Cloverport	C. W. M. orman, president	Mineral, &c.
Covington	Crystal Ice Co.	Ice Factory.
Covington	Jasene Mfg. Co.	Manufacturing.
Covington	Kenton Electric Light Co.	Electric Light Works.
Covington	Richard's Axle & Wheel Co.	Axle & Wheel Works.
Covington	Anchor Soap Co.	Soap Factory.
Covington	Daniel Creek Can. Coal Co.	Coal Mining.
Covington	Petersburg Distilling Co.	Distillery.
Covington	Geiger & Brill	Flur Mill.
Dixie	John S. Wilson	Grist & Feed Mill.
Dover	Williams & Lewis	Remodel Flour Mill.
Franklin	R. & G. W. Beasley	Mineral.
Hartford	J. R. Phipps & Co.	Grain Elevator.
Hartford	J. C. Riley	Tobacco Factory.
Henderson	Henderson Milling Co.	Pottery Works.
Henderson	Robards & Kitchel	Flour Mill.
Henderson	Mfg. Co.	Tobacco Factory.
Hopkinsville	Harry Frazier	Quarrying.
Hopkinsville	W. E. Ragdale & Rice	Tobacco Factory.
Hopkinsville	E. W. C. Edwards	Flour Mill.
Island	B. & McKinney & Stanley	Coal Mining.
Kennec	Main Jellico Min. Coal Co.	IShingle Mill.
Kennec	United Jellico Coal Co.	Coal Mining, &c.
Lebanon	Intelligence Publishing Co.	Water Works.
Lexington	Falls City Jeans & Wool Co.	Enlarge Mill.
Louville	Ky. Wagon Mfg. Co.	Increased Capital.
Louisville	Union Oak Tanning Co.	Tannery.
Louisville	C. C. Mengel, Jr. & Bro. Co.	Lumber Mills.
Louisville	Irwin Stove & Tin Co.	Tinware Factory.
Louisville	Amer. Mechans. Eng. Ass'n	Manufacturing, &c.
Louisville	Langdon-Kreiger Sad. Co.	Saddlery Works.
Louisville	Sulzer & Vogt	Enlarge Machine Works.
Louisville	Boile of Bourbons Co.	Distillery.
Louisville	Ky. Rock Gas Co.	Natural Gas.
Louisville	Gaynor Electric Co.	Double Factory.
Louisville	Langdon-Kreiger Sad. Co.	Saddlery Works.
Louisville	Peter & Burghardt	Brick Works.
Louisville	J. G. Matting y & Son	Distillery, &c.
Louisville	K. L. Stevens Shoe Co.	Shoe Factory.
Louisville	Ky. Cider & Vinegar Co.	Factory.
Louisville	Herman Krupp and others	To Build Brewery.
Louisville	E. J. Merck & Co.	Flour Mill.
Louisville	Chas. H. Irwin	Tinware Factory.
Louisville	Louisville Gas Co.	Enlarge Plant.
Louisville	Sweet Wood Distillery Co.	Distillery.
Louisville	Malleable Iron Works	Iron & Steel Works.
Ludlow	Hill Electric Works	Electrical Appliances.
Maconsville	Providence Mining Co.	Coal Mining.
Mallonia	Pomroy Medicine Co.	Patent Medicines.
Mayfield	Wright, Reaven & Co.	Improve Flour Mill.
Mayville	J. H. Rain	Tobacco Factory.
Mayville	Mayville Gas Co.	Electric Light Plant.
Murray	Holland Bros. & Hay	Flour Mill.

LOCATION.	NAME.	BUSINESS.
Mt. Vernon	Rock Castle Min. & Oil Co. Oil, &c.	
Newport	Newport Aluminum & Cast	Manufacturing.
Newport	Seed Co.	Distillery.
Newtown	John W. Durham	Flour Mill.
Niles	J. W. Johnson	Remodel Flour Mill.
Oakland	W. H. W. & Co.	Flour Mill.
Owensboro	J. R. Osborne & Son	Fundry & Machine Shop.
Owensboro	Robert Frayer	Tobacco Factory.
Owensboro	Owensboro Ice Mfg. &	Ice Factory.
Paducah	Paducah Indus. Iron Wks.	Iron Work.
Paducah	M. H. Witham	Carriage & Buggy Fasty.
Paducah	L. W. Emery, manager	Hub Factory.
Paducah	G. J. Crainmer and others	Electric Light Works.
Paducah	Paducah Gas Light Co.	Electric Light Works.
Paducah	M. Livingston	Marble Quarrying.
Paducah	McKetchum & Co.	Cora Mill.
Princeton	Princeton Iron & Min. Co.	Ore Mining.
Princeton	Princeton Coal Co.	Coal Mining.
Princeton	Bradley & John	Distillery.
Princeton	Red. R. W. Russell	Improve Furnace.
Princeton	D. H. Myers & Douglas	Planing Mill.
Princeton	H. C. Potts	Flour Mill.
Princeton		Saw Mill.
Princeton	Q. S. Bryant	Remodel Flour Mill.
Princeton	Ky. Brick & Tile Co.	Brick & Tile Works.
Princeton	Logan & Logan	Improve Flour Mill.
Princeton	Model Roller Mill Co.	Remodel Flour Mill.
Princeton	Rich Grain Distillery Co.	Flour Mill.
Princeton		Hub Factory.
Princeton	J. A. Tanner	Cob Pipe Factory.

LOUISIANA.

Alexandria	New Orleans Seed Co.	Cotton Seed Oil Mill.
Arcadia	Coe & Brown	Saw & Planing Mill.
Ascension	Ascension P'n. Min. Von Ahlefeldt	Sugar Mill.
Ascension	P'n. B. Lamann & Bro.	Improve Sugar Mill.
Ascension	Ph. E. F. X. Dugas	Improve Sugar Mill.
Athens	Face & Brownfield	Brick Yard.
Bryan	Morris	Planing Mill.
Bryan	W. B. Morris	Saw & Planing Mill.
Burnside	J. W. Tucker	Sugar Mill.
Donaldsonville	Adelard Dandry	Improve Sugar Mill.
Franklin	John B. Lyons and others	Saw Mill.
Greensburg		Saw Mill.
Iberville Parish	Jas. A. Ware	Sugar Mill.
Jennings	McFarland	Brick Yard.
Lake Charles	L. Lagan	Lumber Mill.
Louisiana	Schmidt & Zeigler	Sugar Mill.
Lydia	F. M. Welch and others	Sugar Mill, &c.
Monroe		Grist Mill.
Morgan City	C. Becker	Rebuild Saw Mill.
Morgan City	Martin & Driebehl	Planing Mill & Sash Fac.
New Iberia	Andrew Gosaulin	Sugar Mill.
New Orleans	Rice Planters' & Receiv-	Rice Mill.
New Orleans	ers' Ass'n, (Limited)	Gin.
New Orleans	J. H. Allen & Co.	Gin.
New Orleans	New Orleans Rice Mill Co.	Rice Mill.
New Orleans	A. Baldwin & Co.	Agri. Implement Works.
New Orleans	Frank Zengel	Mill & Gin.
New Orleans	Standard Guano & Chemi-	Cotton Seed Oil Mill.
New Orleans	cal Mfg. Co.	Sugar Refinery.
New Orleans	Itaville Mfg. & Sugar	Sugar Refinery.
New Orleans	Refining Co.	Sugar Refinery.
New Orleans	La. Electric Lt. & Pow. Co.	Electric Light Works.
New Orleans	La. Sugar Refinery Co.	Improve Refinery.
New Orleans	Union Oil Works	Improve Oil Mill.
New Orleans	Southern Furniture Mfg. Co.	Furniture Factory.
New Orleans	New Orleans Drug Co.	Drug & Chemicals.
New Orleans	La. Art. Stone Faving Co.	Artificial Stone Works.
New Orleans	H. Haller Mfg. Co.	Hardware Factory.
New Orleans	Crescent City Mfg. Co.	Shirt Factory.
New Orleans	Bien Aut. Van & Patent Co.	Manufacturing.
New Orleans	Sampson Wood Mfg. Co.	Manufacturing.
New Orleans	Seaboard Mfg. Co.	Stave & Barrel Factory.
New Orleans	Orleans Mfg. & Lumber Co.	Wood Working.
New Orleans	Southern Knitting Works	Bagging Factory.
New Orleans	New Orleans Machinery Co.	Machine Works.
New Orleans	Reynolds Iron Works	Enlarge Works.
New Orleans	Crescent City Knit. Mills	Knitting Factory.
New Orleans	Plaquemine Lum. & Imp. Co.	Shingle and Planing Mill.
New Orleans	Plaquemine	Rice Mill.
New Orleans	Rapids Parish	J. F. Davis
New Orleans	Kap. de Par. h. P. B. Compton	Saw Mill.
New Orleans	Rapids Parish	E. O. Wedon & Co.
New Orleans	Shreveport	C. A. Leffingwell
New Orleans	S. James Parish	R. S.

LOCATION.	NAME.	BUSINESS.
Friendship.....	J. T. Hutchins, manager.	Canning Factory.
Grave Run.....	D. H. Rish.	Remodel Flour Mill.
Hagerstown.....	Hagerst, Spke. & Band Co.	Factory.
Hagerstown.....	J. C. Roulette.	Knitting Factory.
Hagerstown.....	Shank.	Creamery.
Halpine.....	Henry Dwyer.	Quarrying.
Harmony Grove.....	J. Metcalf.	Flour Mill.
Havre de Grace.....		Creamery.
Havre de Grace.....	S. J. & Clay Whiteford.	Flint Mill.
Hughesville.....	Warfield Mfg. Co.	Canning Factory.
Kennedysville.....		Rebuild Canning Factory.
Millington.....	John & Wm. Biggs.	Evaporating Factory.
North East.....	Armstrong, Squire & Co.	Flour Mill.
Owings Mills.....	Benj. F. Groff.	Remodel Flour Mill.
Perryman.....	C. P. Mitchell.	Canning Factory.
Pylesville, nr.....	Isaac Robinson.	Canning Factory.
Rock Hall.....	Joseph Downey.	Evaporating Factory.
Rockville.....	Philius Sawyer.	Stamp Mill.
Seneca.....	Upton, Darby & Co.	Remodel Flour Mill.
Still Pond.....	Black & Krebs.	Rebuild Canning Factory.
Travilah.....		Creamery.
Washington.....	Interior Dept.	Electric Light Plant.
Wash., D. C.....	J. B. Hammond.	Planing Mill.
Wash., D. C.....	U. S. Electric Light Co.	Enlarge Plant.
Wash., D. C.....	F. A. Belt.	Planing Mill.
Wilma.....	Sam. H. Miller.	Canning Factory.
Worton.....	Cooper & Hudson.	Evaporating Factory.
Worton.....	J. M. Irem.	Evaporating Factory.

MISSISSIPPI.

Aberdeen.....	Thom's Hous'n El. L. Co.	Electric Light Works.
Acicola.....	Pinfield.	Manufacturing.
Booneville.....	B. W. Bryant.	Planing Mill.
Booke Chitto.....	Hartman & Allen.	Planing Mill.
Brookhaven.....	M. & J. Priebech.	Planing Mill.
Brookhaven.....	Jas. Adams.	Shingle Mill.
Brookhaven.....	F. H. Hartman.	Planing Mill.
Brookhaven.....	Priebech Lumber Co.	Planing Mill.
Chesterville.....	D. Jones Austin.	Flour Mill.
Columbus.....	A. Leckenby.	Broom Factory.
Corinth.....	L. M. New.	Wool Carding Mill.
Derby.....	McClure Bros.	Planing Mill.
Durant.....	Durant Comp. & Imp. Co.	Cotton Compress.
Grenada.....	Grenada Improvement Co.	Ice Fac. & Canning Fac.
Greenville.....	Greenville Ginning Co.	Gin.
Greenville.....	W. E. Hunt.	Gin.
Greenville.....	C. L. Merrill.	Box & Veneer Mill.
Greenville.....	F. Barnes.	Machine Shop.
Greenville.....	Greenville Cor. Comp. Co.	Enlarge Plant.
Hickory Flat.....	Crawford & Cox.	Planing Mill.
Hickory Flat.....	Daniel & Smith.	Saw Mill.
Holly Springs.....	Holly Springs Fire Brick & Earthware Co.	Fire Br'k & E'henw's Fac.
Jackson.....	Jenny Electric Light Co.	Electric Light Works.
Kosciusko.....	A. Fletcher & Son.	Saw Mill.
Lee County.....	Shannon & Bro.	Stave Factory.
Macon.....	Macon Comp. & White Co.	Cotton Compress.
Macon.....	Clark, Lewis & Bush.	Creamery.
Mayhew.....	Thos. A. Burgin.	Corn Mill and Gin.
Meridian.....	City Compress Co.	Cotton Compress.
Meridian.....	Starr Johnson.	Saddle & Harness Fact'y.
Meridian.....	Merid. Land & Indust'l Co.	Manufacturing.
Meridian.....	Thomson-Houston Elec- tric Light & Power Co.	Electric Light Works.
Meridian.....	J. R. Hood.	Grist Mill.
Meridian.....	Shipress Compress Co.	Cotton Compress.
Natchez.....	Nat. Jackson & Col. R. R.	Machine Shop.
Natchez.....	Citizen's Electric Light Co.	Electric Light Works.
Oak.....	Budwill, McConnell & Co.	Planing Mill.
Perkins.....	Morris.	Saw Mill.
Perkins.....	H. T. Graves.	Brick Y'd & Shingle Mill.
Poplar Creek.....	S. N. Cortlege.	Saw Mill.
Poplarville.....	Orvis & Sweet.	Lumber Mill.
Potts Camp.....	Morrison & Co.	Saw Mill.
Rienzi.....	F. M. Boone.	Planing Mill.
Saltville.....	Kohlheim & Shuler.	Saw Mill.
Scobee.....	Guy & Jack.	Saw & Grist Mill.
Shelby.....	Shelby Gin Co.	Gin.
Shelby, near.....	Wade Bros.	Saw Mill.
Starkville.....	T. J. Wood & Co.	Wagon & Carriage Fac.
Vicksburg.....	Curphy & Mundy.	Enlarge Planing Mill.
Vicksburg.....	C. C. Flowence.	Double Ice Factory.
Water Valley.....	Water Valley Ice Mfg. Co.	Canning Factory.
West Point.....	Norwood & Genway.	Candy & Machine Shop.
West Point.....	S. N. Murf.	Carriage & Wagon Fac.
West Point.....	Maxson & Snyder.	Saw Mill.
Winona.....		Cotton Compress.
Winona.....		Brick Yard.
Yazoo City.....	Yazoo Oil Works.	Improved Oil Mill.
Yazoo City.....	Thomson-Houston Elec- tric Light Co.	Electric Light Works.
Yazoo City.....	John Gunning.	Quarrying.

NORTH CAROLINA.

Asheville.....	Wilson Preservative Co.	Factory.
Asheville.....	Choptank Iron Ore Min. Co.	Manganese Mining.
Asheville.....		Saw Mill.
Asheville.....	C. E. Graham Mfg. Co.	Enlarge Cotton Mill.
Asheville.....	Graham Shoe Co.	Enlarge Shoe Factory.
Berry.....	W. M. Mobley & Co.	Stave Mill.
Big Falls.....	Big Falls Cotton Mills.	Additional Machinery.
Boley.....	Gay Mfg. Co.	Saw Mill.
Carthage.....	Tyson & Jones.	Enlarge Carriage Factory.
Charlotte.....	Jones & Lockwood.	Knitting Factory.
Charlotte.....	C. W. Bostic & Co.	Enlarge Saddlery Factory.
Charlotte.....	Elliot & Maff.	Malgre Furniture Fact'y.
Charlotte.....	R. D. and C. Cant. R. R.	Compress.
Charlotte.....	Piedmont Milling Co.	Flour Mill.
Charlotte.....	Charlotte Water Works.	Enlarge Plant.
China Grove.....	J. S. Warner.	Gold Mine.
Cronly.....	Acme Mfg. Co.	Pine Straw Bagging.
Dallas, near.....	J. C. Puett.	Saw Mill.
Danburg.....	Thos. Ewing.	Mining, &c.
Durham.....	Dur. Wooden & Woolen Mill.	Enlarge Mill.
Durham.....	Durham Gas Co.	Gas Works.
Durham.....	R. F. Morris & Son Mfg. Co.	New Tobacco Factory.
Durham.....	C. M. Herndon & Atwater.	Ice Factory.
Durham.....	Durham Electric Light Co.	Gas Works.
Egypt.....	W. H. Seagraves.	Coal Mining.
Farmington.....	A. W. Ellis & Co.	Saw & Flour Mill.
Fayetteville.....	Fayetteville Oil Co.	Improved Mill.
Fayetteville.....	A. H. Smith.	Wire Fencing.
Fayetteville.....	Fayetteville Ice Factory.	Enlarge Factory.
Flat Rock.....	Carolina Canning Co.	Canning Factory.
Gamewell.....	Gamewell Tobacco Mfg. Co.	Tobacco Factory.
Gastonia.....	Leroy Morrow.	Remodel Flour Mill.
Gibsonville.....	B. & J. A. Davidson.	Cotton Mill.
Graham.....	Geo. A. Curtis.	Canning Factory.
Greensboro.....	J. L. Scott.	Tobacco Factory.
Greensboro.....	M. C. Patterson.	Tobacco Factory.
Greensboro.....	Greensbr. Land & Imp. Co.	Tobacco Factories.
Greensboro.....	Jordan & Still.	Marble Yard.
Greensboro.....	Greens. Gas & Ele. L. Co.	Electric Light Plant & En- large Gas Works.
Iron Station.....	J. E. Reinhardt.	Cotton Mill.
Laurinburg.....	Laurinburg Cotton Oil Co.	Cotton Seed Oil Mill.
Leaksville.....	D. F. King.	Tobacco Factory.
Lenoir.....	Charles Murtagh.	Smelting Works.
Lenoir.....	S. W. Hamilton.	Canning Factory.
Levellville.....	E. C. Dull.	Saw Mill.
Lumber Bridge.....	M. L. Marley.	Lumber Mill.
Macon County.....	H. D. Child.	Mining.
Manchester.....	C. W. Huske.	Saw Mill.
Morganton, nr.....	J. W. Garrison.	Saw Mill.
Mt. Holly.....	Mt. Holly Flow Mfg. Co.	Flow Factory.
Nebo.....	A. A. Mouch.	Cider & Vinegar Factory.
Newton.....	Newton Roller Mill Co.	Flour Mill.
Old Fort.....	Old Fort Lumber Co.	Saw Mill.
Oxford.....	B. C. Cosart.	Tobacco Factories (2).
Pactolus.....	Rufus Fleming.	Saw Mill.
Pineville.....	Pineville Cotton Mills.	Cotton Mill.
Raleigh Ice Co.....		Enlarge Ice Factory.
Red Springs.....	W. A. Williams & Bro.	Planing Mill.

LOCATION.	NAME.	BUSINESS.
Med Springs.....	A. V. Wilson.	Saw Mill.
Red Springs.....	Guerrant & Williams.	Saw Mill.
Red Springs.....	Tardy & Vandegrift.	Saw Mill.
Red Springs.....	Williams & Bro.	Saw Mill.
Reinhardt.....	J. F. Reinhardt.	Mining.
Rockwell.....	Alex. Trepler.	Saw Mill.
Rutherfordton.....	T. S. Duffy, president.	Canning Factory.
Salem.....	A. C. Hough & Co.	Enlarge Hosiery Factory.
Salem.....	Salem Iron Works.	Veneer Factory.
Sanford.....	J. B. Makepeace.	Chair Factory.
Statesville.....	D. A. Morrison & Co.	Bag & Broom Factory.
Sylva.....	A. Jarrett & Bro.	Saw & Planing Mill.
Sylva.....	S. Jarrett.	Kaolin Mining.
Troy.....	Troy Gold Mine (Limited).	Mining Machinery.
Wadesboro.....	Wadesboro Silk Factory.	Enlarge Factory.
Warsaw.....	Thos. B. Pierce.	Gin.
Washington.....	C. H. Sterling.	Grist Mill.
Webster.....	Weniger.	Mining.
Wilmington.....	Navyana Guano Co.	Double Works.
Wilmington.....	A. David.	Clothing Fact'y.
Wilmington.....	W. A. Martin & Co.	Paint Mill.
Wilmington.....	Dalton Chemical Co.	Chemical Factory.
Wilmington.....	L. Hansen & Smith.	Terra Cotta Works.
Winston.....	Hodgins Bros. & Lunn.	Tobacco Factory.
Winston.....	J. A. Vance.	Foundry & Machine Shop.

SOUTH CAROLINA.

Aiken.....	Matthews & Wigfall.	Wagon Factory.
Blacks.....	Magn. Iron & Stl. Min. Co.	Mining.
Fert Motts.....	J. A. Peterkin.	Veneer Factory.
Campobello.....	Wm. J. Fisher.	Distillery.
Charleston.....	Berkley Phos. Co.	Phosphate Works.
Charleston.....	C. C. Pinckney.	Enlarge Phosphate W. ks.
Charleston.....	Palmer Mfg. Co.	Enlarge Cooperage Works.
Charleston.....	Atlantic Phosphate Co.	Enlarge Works.
Charleston.....	Ashley Phosphate.	Enlarge Works.
Charleston.....	John F. Riley.	Machine Shop.
Charleston.....	Boys Bag Mfg. Co.	Bag & Broom Factory.
Charleston.....	Charleston Mfg. Co.	Enlarge Cotton Mill.
Charleston.....	Carolina Typographic Co.	Type Setting Machines.
Chester.....	Chester Mfg. Co.	Cotton Mill.
Clifton.....	Clifton Cotton Mill Co.	Electric Plant.
Columbia.....	H. M. Gibson & Co.	En. Cotton Seed Oil Mill.
Columbia.....	H. M. Gibson & Co.	Enlarge Fertilizer Fact'y.
Columbia.....	Miller Cotton Bating Co.	Bating Factory.
Darlington.....	Darlington Ginning, Mill- ing & Fertilizer Co.	Gin., &c.
Dillon.....	Dillon Oil Mill Co.	Cotton Seed Oil Mill.
Eastover.....	J. D. Stanley.	Pine Straw Bagging.
Fort Lawn.....	Hough & Barnett.	Gin.
Glassy M'n'n.....	John W. Rector.	Distillery.
Glassy M'n'n.....	Center & Howard.	Distillery.
Hawthorne.....	Hance.	Gin.
Millbrook.....	Isaiah George.	Gin.
Montmorenci.....	E. B. Curtis.	Saw Mill.
Rock Hill.....		Sash & Door Factory.
Rock Hill.....		Furniture Factory.
Spartanburg.....	Spartanburg Gas, Electric Light & Power Co.	Electric Light Works.
Wilson.....	Thomas Wilson.	Saw & Planing Mill.
Windsboro, nr.....	L. F. Wilds.	Grist Mill.
Windsboro.....	Bunyan Emerson.	Brick Yard.
Wellford.....	J. H. Howard.	Distillery.

TENNESSEE.

Athens.....	Athens Furniture Co.	Saw Mill.
Athens.....	S. M. Burkett.	Planing Mill.
Atoka.....	The Atoka Creamery.	Creamery.
Bellbuckle.....	J. T. O. Ryley.	Marble Works.
Bradford.....	Benj. G. Patrick.	Distillery.
Bristol.....	J. P. Lewis and others.	Ice Factory.
Bristol.....	Gauthier & Houle.	Brick Works.
Brownsville.....	J. Walter Bates & Co.	Water Works.
Brownsville.....	R. H. Haralson.	Gin.
Chattanooga.....	Robert Kelley & L. Ervin.	Brick Yard.
Chattanooga.....	Brands Printing Co.	Printing Office.
Chattanooga.....	Dorsey, Paine & Co.	Electrical Works.
Chattanooga.....	Chat. Min. & Railway Co.	Mining, &c.
Chattanooga.....	Wm. Maffett.	Brass Foundry.
Chattanooga.....	Thomas Evans.	Iron Foundry.
Chattanooga.....	Chattanooga Glass Mfg. Co.	Glass Works.
Chattanooga, nr.....	R. C. Hutchinson and oth.	Rustic Chairs.
Chattanooga.....	Acme Gold Min. & Mill. Co.	Mining.
Chattanooga.....	F. McArdle and others.	Ice Factory.
Chattanooga.....	Chattanooga Wood Vul- canizing Co.	Saw Mills.
Chattanooga.....	Look't Wm. Cord Frn. Co.	Furniture Factory.
Cleveland.....	Cleveland Stove Works.	E. large Works.
Cleveland.....	Cleveland Woolen Mills.	Dye Works, &c.
Columbia.....	Col. Electric Lt. & Pow. Co.	Electric Light Works.
Cookeville.....	Penn. Real Estate & Lum- ber Co.	Saw Mills.
Coopertown.....	Jas. H. Holmes.	Distillery.
Covington.....	Cov. Industrial Mfg. Co.	Manufacturing.
Cumberland.....	Cumberland Iron Works.	Improved Furnace, &c.
Dunlap.....	Rogers Bros.	Pumrute Factory.
Dyer.....	Dyer Handie Co.	Ham-le Factory.
Dyersburg.....	J. M. Hart.	Flour Mill.
Dyersburg.....	Frank Shepard.	Water Works.
East Lake.....	Spring Lake Water Co.	Water Works.
Eria.....	N. Christenson.	Saw & Planing Mill.
East Springs.....	H. H. Milnor.	Stave Factory.
East Springs.....	E. N. Gannaway.	Tannery.
Gallatin.....	Sum. Co. Cream & Mfg. Co.	Creamery.
Greenville.....	Fox Coal & Coke Co.	Coke Ovens.
Greenville.....	Unaka Tobacco Works.	Tobacco Factory.
Greenville.....	Greenville Electric Lt. Co.	Electric Light Works.
Hansford.....	John H. Farmer.	Saw Mill.
Helewood.....	Beckner's Cannel Coal Co.	Coal Mining.
Henderson.....	Winkle & Co.	Planing Mill.
Hopewell Spgs.....	E. F. & W. A. Crowder.	Saw Mill.
Hopewell Spgs.....	B. Taylor & Co.	Tannery.
Huffstetter.....	J. D. Garner & Son.	Pottery Works.
Iron City.....	Junk Bros.	Saw Mill.
Iron City.....	R. F. Porch Mfg. Co.	Saw & Planing Mill.
Jackson.....	J. J. Wells & Son.	Spoke Factory.
Jackson.....	J. T. Cain & Son.	Planing Mill.
Jackson.....	Jackson Woolen Mill.	Woolen Mill.
Jackson.....	White Bros.	Gin.
Jackson.....	Vauden Bros.	Cigar Factory.
Kington.....	Round Island & Tean- River Iron Co.	Manufacturing.
Knoxville.....	Knoxville Cab. Mant. Fcty.	Mantel Factory.
Knoxville.....	Knoxville Brick Co.	Brick Works.
Knoxville.....	Shamrock Coal Co.	Mining.
Knoxville.....	Knoxville Lumber Co.	Saw Mill & Sash Factory.
Knoxville.....	Unaka Soap Works.	Double Works.
Knoxville.....	Southern Land & Ming. Co.	Mining, &c.
Knoxville.....	Knoxville Gas Co.	Enlarge Works.
Leashear.....	Meredith & Sprinkle.	Gin.
Linden.....	D. C. Cook & Co.	Saw Mill.
Manchester.....	Newsom & King.	Mattress Factory.
Memphis.....	Tenn. Brewing Co.	Bottling Works.
Memphis.....	Beard, Wilson & Co.	Box Factory.
Memphis.....	J. G. Falls.	Gin Saw Gummers.
Memphis.....	A. N. Kellog Newspaper Co.	Printing.
Memphis.....	South Steam Dye Wks. Co.	Dye Works.
Memphis.....	Wm. C. Ellis & Son.	Foundry.
Memphis.....	Henry Loeb.	Shirt Factory.
Moody Creek.....	Payless & Dunn.	Water Filters.
Mouse Creek.....	P. H. Schultz.	Lime Works.
Murfreesboro.....	D. L. Lyon & Tompkins.	Evaporating Factory.
Nashville.....	Moore Mining & Mfg. Co.	Iron Ore Mining.
Nashville.....	Toiler Publishing Co.	Printing, &c.
Nashville.....	Tenn. Coal, Iron & R. R. Co.	Enlarge Capital.
Nashville.....	Nash. Rap. Tan. & Mfg. Co.	Belt Factory.
Nashville.....	Wm. Benty & Co.	Spice Mill.
Nashville.....	Nashville Pottery Co.	Pottery.
Nashville.....	Nash. Chat. & St. L. Rd. Co.	Machine Shops.

LOCATION.	NAME.	BUSINESS.
Nashville.....	Waters Mfg. Co.	Foundry.
Nashville.....	Junk bro. Lumber Mfg. Co.	Planing Mill.
Nashville.....	Macon & Co.	Distillery.
Nashville.....	Nash Chat. & St. L. Rd. Co.	Machine Shops.
Nashville.....	John B. King.	Planing Mill.
Nashville.....	Nashville Democrat.	New Machinery.
Newport.....	Randolph & Son.	Flour Mill.
Palmyra.....	Cumeland Mfg. Co.	Stave Factory.
Paris.....	Phoenix Roller Mills.	Flour Mill.
Petersburg.....	H. C. Dwiggin.	Flour Mill.
Pondville.....	Suren & Fleming.	Distillery.
Rockwood.....	Roane Iron Co.	Improved Furnace.
Rogersville.....	W. S. Kenner & Co.	Marble Mill.
Rogersville.....	W. S. Kenner & Co.	Two Saw Mills in Va.
Rudolph.....	R. Wood.	Flour Mill.
Shelbyville.....	J. M. Mullin.	Saw Mill.
Shelbyville.....	Sylvan Mills.	Improved Mill.
Shelbyville.....	H. C. Dwiggin.	Flour M. l.
Shelbyville, nr.....	Jas. M. Muns.	Saw Mill.
Somerville.....	Somerville Comp. & Stor. Co.	Compress.
Somerville.....	Somerville Comp. & Stor. Co. Mill & G. n.	
Somerville.....	Somerv. le Fruit & Evap. Co.	Evaporating Factory.
South Pittsb'g.....	South Pittsburg Pipe Wks.	Enlarge Works.
South Pittsb'g.....	Perry Stove Works.	Stove W. ks.
Springfield.....	A. C. Baggatt.	Distillery.
Straw's Plns.....	East Tenn. Canning Co.	Canning Factory.
Treadway.....	Hiser.	Saw Mill.
Trenton.....	W. J. McCleary.	Grist Mill.
Trenton.....	Trenton Cotton Mills.	Gin.
Trenton.....	Raney & Talley.	Marble Yard.
Tullahoma.....	Sims & Davis.	Distillery.
Tullahoma.....	M. N. Moore & Son.	Pork Packing House.
Tullahoma.....	W. P. Baird.	Saw & Planing Mill.
Tullahoma.....	J. P. O. Ryley.	Marble Yard.
Union City.....	Sanders & Gardner.	Hay Press Factory.
Wartrace.....	Emory Valley Mining Mfg. & Railroad Co.	Manufacturing.
Winchester.....	W. Ransom.	Flour Mill.
Winchester.....	Wia. Spoke & Handle Co.	Double Works.
Winfield.....	J. S. Dorman.	Saw Mill.

TEXAS.

Ablene.....	H. B. Smith & Woodward.	Gin.
Atlanta.....		Coal Mining.
Beaumont.....	C. K. Price.	Grist Mill.
Beeville.....	Buchell & Co.	Mill & Gin.
Bonham.....	Boham Cotton Compress Co.	Cotton Compress.
Bremont.....	Jas. W. White.	Grist Mill & Gin.
Brenham.....	F. W. & R. A. Schulenberg.	Flow & Wagon Factory.
Burnet.....	Jacob Kliner & Son.	Quarrying.
Cisco.....		Soap Factory.
Cottdale.....	Cot'de All. Gin. & Mill Co.	Gin. & Mill.
Colorado.....	Long Star Salt Co.	Double Salt Works.
Corpus.....	American & Son.	Cotton Compress.
Cleburne.....	Cleburne Electric Light Co.	Electric Light Works.
Dallas.....	Farmers' Alliance Oil Co.	Cot. S'd Oil Mill & Bag. Fy
Dallas.....	Evening Journal Pub. Co.	Printing, &c.
Dallas.....	Southern Pump Co.	Pump Factory.
Dallas.....	Dal. Cotton & Woolen Mills.	Increase Capital.
Denison.....	C. E. Bauer.	Rubber Stamp Factory.
Eagle Pass.....	Coahuila Coal Co.	Coal Mining.
Eastland.....	Farmers' Alliance Co-op.	Flour Mill.
El Paso.....	Leites & Page.	Soap Factory.
El Paso.....	El Paso Fdy. & Mach. Co.	Foundry & Machine Shop.
El Paso.....	South. Pacific Railroad Co.	Machine Shops.
El Paso.....	El Paso Light Co.	Electric Light Works.
El Paso.....	A. W. Dutton.	Gas Works.
Floyd.....	Farmers' Alliance.	Gin.
Fort Worth.....	Fort Worth Granolithic	Enlarge Factory.
Fort Worth.....	Roofing Co.	Bagging Factory.
Fort Worth.....	Moss Collar Co.	Bagging Factory.
Fort Worth.....	Tex. & Pac. Coal Min.	Coal Mining.
Fort Worth.....	W. T. Tander.	Sash & Door

LOCATION.	NAME.	BUSINESS.
Goodson	Clarmorgan Co.	Water Works.
Harrisonburg	J. P. Houck	Enlarge Tannery.
Lexington	Arch Lyle	Saw Mill.
Lexington	Stuart & Day	Chair Factory.
Lexington	City	Enlarge Water Works.
Low Moor	Low Moor Iron Co.	Improved Furnace.
Lynchburg	Kara & Hickson	Wagon Factory.
Lynchburg	Lynchburg Street Ry. Co.	Electric Plant.
Lynchburg	Wm. H. Ford	Brick Works.
Lynchburg	Wm. H. Ford	Flour Mill.
Lynchburg	Holt, Schaefer & Co.	Double Tobacco Ext. Fac.
Lynchburg Station	W. J. Casada	Canning Factory.
Luray		Water Works.
Manassas	A. B. Fitzer	Flour Mill.
Manchester	Manchester Ry. & Imp. Co.	Electrical Plant.
Mandota	F. M. Barker	Sash and Door Factory.
Nammond Rv	J. W. Lee	Oyster Packing House.
Norfolk	Norfolk Gas Light Co.	Electric Light Works.
Norfolk	Norfolk Electric Power Co.	Electric Light Works.
Norfolk	Norfolk Shipping Co.	Cotton Compressing, &c.
Norfolk	Jas. E. Barry	Enlarge Foundry.
Norfolk	Keneth & Co.	Kindling Wood Factory.
Ocoquan	E. Janney	Remodel Flour Mill.
Petersburg	Davis & Whittle	Enlarge Gunpowder Works.
Petersburg	Geo. Cameron	Enlarge Tobacco Factory.
Petersburg	C. A. Jackson	Tobacco Factory.
Petersburg	J. A. Williamson	Tobacco Factory.
Petersburg	Geo. A. Manne	Fire Works.
Petersburg	R. W. Collier & Co.	Carriage Factory.
Pittsville	Edmund D. Smith & Co.	Mining.
Poehontas	G. W. Lamberts	Coal Mining.
Portsmouth	Portsmouth Market Factory.	Double Factory.
Pulaski City	Howard & Seldridge	Tannery.
Pulaski City	Calfee & Barrett	Iron Ore Mining.
Rapidan	H. T. Halladay	Remodel Flour Mill.
Raymond	Raymond Mills Co.	Handle Fac. & Plan. Mill.
Raymond	Antes	Brick Yard.
Richmond	H. W. Rountree & Bro.	Tunk Factory.
Richmond	Pamunky Mari & Phos. Co.	Phosphates, &c.
Richmond	Old Dominion Specialty Co.	Druggists' Specialties.
Richmond	City	Enlarge Water Works.
Richmond	Va. Elec. Lt. & Pow. Co.	Enlarge Elec. Light Plant.
Richmond	City	Enlarge Gas Works.
Richmond	Nat. Cot. Seed & Oil Co.	Cotton-Seed Oil Mills.
Roanoke	Roanoke Machine Works	Enlarge Car Works.
Roanoke	Washington Zinc Co.	Zinc Mining.
Roanoke	Roanoke Coal & Lumb. Co.	Mining, &c.
Roanoke, near	Welch & Ingersoll	Iron Ore Mining.
Roanoke	P. L. Terry & Co.	Remodel Flour Mill.
Roanoke	P. L. Terry	Creamery.
Rocky Mount	Rocky Mt. Mill & Mfg. Co.	Planing Mill.
Salem	A. M. Griffith	Brick & Tile Works.
Salem	Bonsack Machine Co.	Increased Capital.
Salem	Salem Canning Co.	Enlarge Capital.
South Boston		Water Works.
Staunton	Bush Run Coal & Coke Co.	Coal Mining, &c.
Stony Point	Richard Woods	Cora Mill.
Suffolk	H. F. Artman & Co.	Carriage Factory.
Suffolk	Martin Bros.	Cigar Factory.
Suffolk	D. S. Walton	Woodenware Factory.
Tazewell	C. H. Samuel Wilton	Mining.
Union Mills	Union Cotton Mills	Cotton Mill.
Union Mills	Armstrong & Co.	Knitting Factory.
West Point		Cigar Factory.

WEST VIRGINIA.

Alderson		Mining.
Berkeley Spgs.	DeFord & Co.	Double Tannery.
Charleston	Kanawha Paper Co.	Manufacturing.
Charleston	Craig Scale Co.	Scale Factory.
Charleston	Charleston Gas Co.	Improved Works.
Charleston	Jacobs Granite & Marb. Co.	Marble Works.
Charlestown	B. C. Washington	Water Works.
Childs	T. J. Crouser	Saw Mill.
Cott	Me. Sterling Cl. & Ck. Co.	Coal Mining, &c.
Davis, near	Blackwater Boom & Lm. Co.	Lumber Mill.
Freemans	Buckeye Coal & Nail Co.	Mining, &c.
Gorman	Wm. E. Whitmer & Son	Saw Mill.
Grafton	Leroy Coffran	Rebuild Saw Mill.
Grafton	Grafton Publishing Co.	Printing, &c.
Hambley	Coaldale Coal Co.	Mining.
Harper's Ferry	James McGraw	Bottling Works.
Hinton	J. L. Swope & Maxwell	Flour Mill.
Hinton	J. L. Swope	Saw Mill.
Independence	A. R. Smoot	Remodel Flour Mill.
Kingwood	Matheny & Linton	Saw Mill.
Martinsburg	J. W. Humer and others	Iron Mining.
Milton	W. O. Walton	Stave Factory.
Parkersburg	Eagle Flouring Mills	Flour Mill.
Parkersburg	Parkersburg Mill Co.	Saw Mill.
Parsons	Cheat Riv. Boom & Mfg. Co.	Manufacturing, &c.
Raymond City	Thomas B. Bancroft	Cot. Mining.
Roadcove	Cumberland Lumber Co.	Lumber.
Raccoon	Raccoon Stock & Farn. Co.	Furniture Factory.
Shepherdstown	Spring Mfg. Co.	Manufacturing.
Short Creek	Hopely & Banc	Brick Works.
Sisonville	E. A. Humphries	Flour Mill.
St. Albans	Howman Lumber Co.	Saw Mill.
St. Albans	John Short	Saw Mill.
Stone Cliff	Providence Coal Co.	Mining, &c.
Stone Cliff	Reliance Coal & Coke Co.	Mining, &c.
Union Mine	Kanawha & Youghiogheny	Coal Mining.
Wardensville	C. Zapp	Distillery.
Wellburg	Harvey Paper Co.	Improve Mill.
Wheeling	Wheeling Iron & Nail Co.	Improved Furnace.
Wheeling	La Belle Pottery Co.	Pottery.
Wheeling	W. Va. China Co.	Enlarge Works.
Wheeling	Wheeling Butchers' Ass'n	Tallow Factory.
Wheeling	Bloch Bros.	Enlarge Tobacco Factory.
Willburg	T. S. Dare & Co.	Carriage Factory.
Winfield	W. P. Read	Coal Mining.

[Rebuilt or being rebuilt after being burned.]

[Companies or firms in existence prior to July 1, 1888, but since that time have either enlarged their works, built new works, or increased capital. In many of these cases given in this list, reference is made to entirely new works built by old firms.]

Mr. J. H. ALEXANDER, secretary of the Augusta National Exposition, in a letter to the MANUFACTURERS' RECORD, says:

"Our prospects get better every day. All our exhibitors approve the change of dates, and we are getting many new ones from Cincinnati and Columbus, O., that could not get here for our original dates. We shall be fuller and more complete and have vastly larger attendance than was possible under the original programme. Our races, November 22 to December 4, are going to be particularly benefited and bettered by the postponement."

Mr. C. G. MOON, of Crawfordville, Ga., writes to the MANUFACTURERS' RECORD, regarding the discovery of a soap mine and says: "It is a certainty and one of the grandest discoveries of the age. It is good soap and is plentiful. It resembles castle soap, has but little smell, is excellent for washing smutty grease from the hands, such as printers' ink. It is a fortune to the owner."

A Visit to the Chicago Exposition.

[Special correspondence MANUFACTURERS' RECORD.]

CHICAGO, ILL., September 28, 1888.

Thinking a few notes on the various industrial exhibits at the exposition might be interesting to the readers of the MANUFACTURERS' RECORD, I made a point of paying it a couple of visits this week, and eschewing the temptations presented by the picture gallery, the aquarium and the very excellent band, devoted my time to looking up the machinery and other kindred departments. The first thing that attracted my attention was the sidewalk light exhibit of Brown Bros. Manufacturing Co., of this city. They have arranged several of their largest lights so as to form a pyramid, which, being brilliantly lit up from the interior, produces not only a novel but a highly artistic effect, and is by no means the least attractive feature of this section. The Rice & Whitacre Manufacturing Co. exhibit several specimens of "Gurney's hot water heater." This heater is very highly spoken of, and the attention given it by the visitors seems to indicate that it has valid claims to the consideration of all housekeepers who are exercised in mind over the vexed question of how to keep warm in winter at the least possible outlay. A very attractive display was made by Westphal's revolving self-draining flower stand, manufactured by Schenck's Adjustable Fire Back Co., of Chicago. The flower stand is not only a marvel of artistic design, but it is also remarkable for the ingenuity displayed in the arrangement of the self-draining apparatus. To judge from the comments made by the fair portion of the visitors, it is likely to come into large demand. The Butz automatic heat regulator is another novel and highly interesting exhibit. It is manufactured by A. M. Butz & Co., 154 Lake street, Chicago, and is very highly endorsed. The Carman dry or semi dry press brick machine attracts a great deal of attention. It is extremely simple in construction, and a one mould machine, it is claimed, is capable of producing 7,000 bricks per day of ten hours. Mr. Robert B. Smith, of this city, is the exhibitor. The Saginaw Manufacturing Co. make a very interesting display of the Gilbert Universal wood split pulley, of which they are the sole manufacturers. The pulley is undoubtedly an excellent one, and its construction presents many novel and interesting features. The element of strength and durability has entered largely into its design, and there is no doubt but that it will grow rapidly in public favor. Mr. Thomas R. Martin, the Chicago manager for the company, has been long and favorably known to the trade here, and in his hands the pulley is sure of efficient representation. The "Little Wonder," to use the expression I heard a very gushing young lady make use of as her best young man dilates upon its merits, "is just too cute for anything." It is manufactured by the Cornell Engine Co., of Chicago. It is an upright one horsepower gas engine, having a rotary valve. The power is produced by the combustion in the cylinder of a dilute mixture of gas and air under compression. The mixture, compression and impulse occur at each revolution. Its mechanical simplicity is wonderful, it being made up of a cylinder, crank shaft, fly-wheel, eccentrics and valve. The speed is about 500 revolutions per minute. One of the most interesting exhibits is the Nye steam vacuum pump. The largest size pump made by this company is kept in full play, and the volume of water it throws up is, to an uninitiated onlooker, simply marvelous. While taking in this very interesting sight, rather an amusing incident occurred. A middle-aged, powerfully-built, sailor-like gentleman came beside me, and after gazing intently at the pump for some time, gave vent to his feelings in this fashion: "Say, shipmate, if I'd had that big fellow there aboard a little brig called the Lizer Jane, as sunk off the banks four years ago, she'd been afloat now. Ye see we were run into by a great hulking tramp steamer and a hole knocked into us as big as a barn door, and our pumps couldn't keep her afloat over half an hour, but I'll allow that big fellow there would come nigh pumping out the Atlantic, if you wanted him." It is needless to say our friend's naive remarks caused much amusement to the bystanders. The American Filter Co. have a very elaborate display of their filtering plant. Judging from the specimens of water I saw, their work seems absolutely perfect, and as the water supply now becomes such an important element in the health of our large cities, the American Filter Co. may justly claim that they enact the role of public benefactors. They are prepared to furnish plans and estimates for securing absolutely pure water to cities, towns, manufacturing establishments, &c. The Alfred C. Kemper Covering Co. exhibit specimens of their magnesia sectional covering, which they claim can stand 200 degrees of heat without showing any signs of burning. It is composed of carbonate and silicate of magnesia, and shows the highest

record as a non-conductor of heat of any non-combustible known. The Machinists' Supply Co. make a very extensive and interesting display, embracing every requisite for the machine shop. Their stand seemed to attract a great deal of attention, and I overheard several very complimentary remarks on its variety and extent. The Chicago Exhaust & Blow Pipe Works display one of their centrifugal shavings and dust collectors. This is a very praiseworthy machine, and is adapted for all wood-working establishments, planing mills, &c., in which exhausting fans are used. It separates the shavings and dust from the air, feeding them directly into the furnace, or depositing them in the shavings house. It is made entirely of iron, and is fire proof. A well-known Chicago planing mill owner joined me while I was looking at this machine, and I asked his opinion as to its merits. "I use it myself," said he, "and I would not be without it for ten times what it cost. I consider it an absolute necessity to every one in our line of business." Shipman, Bradt & Co., of DeKalb, Ill., exhibit a combination piano mover. It is extremely ingenious, and is adapted for moving either upright or square pianos. It is so arranged as to do away with any chance of the piano being scratched or defaced through coming in contact with doors or walls when in course of removal. Two men can move an instrument with greater ease and safety than four could under the old system. J. Dunfee & Co., of this city, have a very excellent display of wood carpets, parquet, inlaid and strip floors. Great taste has been displayed in the arrangement of their different products, and their stand is well worthy of a detailed inspection. The Chapman Valve Manufacturing Co. have an extensive and elaborate display of their products, ranging from tiny valves no larger than a child's top to their largest size, tested up to a pressure of 2,000 pounds on the square inch. Their products are, however, too well known to require any further comment here. The Edinburg Pulley Co., of Edinburg, Ind., make quite an interesting display of their self locking wood split pulleys. One of the special advantages claimed for it is that it is the only pulley that can be put on while the shaft is in motion. The American Well Works have on exhibition a complete outfit of their hydraulic drilling machinery for well sinking. This machine drills the well and removes the dirt by bringing it through the drill rods; and when water is reached it pumps the sediment out, giving a free flow of water before the strainer and valves are put in. The nervous and timid housekeeper who lives in continual dread of the midnight marauder may now rest his weary head in peace, for the Electric Protection Supply Co., of Chicago, have succeeded in producing an electric floor matting that renders it impossible for any one to enter or cross a room after the electric connection is made without ringing an alarm. The invention is endorsed by the chiefs of police in all the large cities, and as it is, comparatively speaking, inexpensive, the indications are it will come into very general use. In closing this letter it would be unjust not to notice the very excellent service of the Western Electric Light Co., who have charge of the lighting of the building. I also take the opportunity to tender my thanks to the gentlemen in charge of the various exhibits for their courtesy in explaining the technical points, &c., of their respective products. G.

It was stated in the MANUFACTURERS' RECORD last week that the Trion Manufacturing Co., of Trion Factory, Ga., had decided to build another cotton mill of 15,000 spindles and 342 looms. Their present mill has 8,456 spindles and 258 looms. The new mill will cost \$300,000, and will be built without increasing the stock, the surplus fund on hand amounting to \$244,000, and the balance it is expected will be made up from the earnings of the present year. That is certainly a pretty healthy showing.

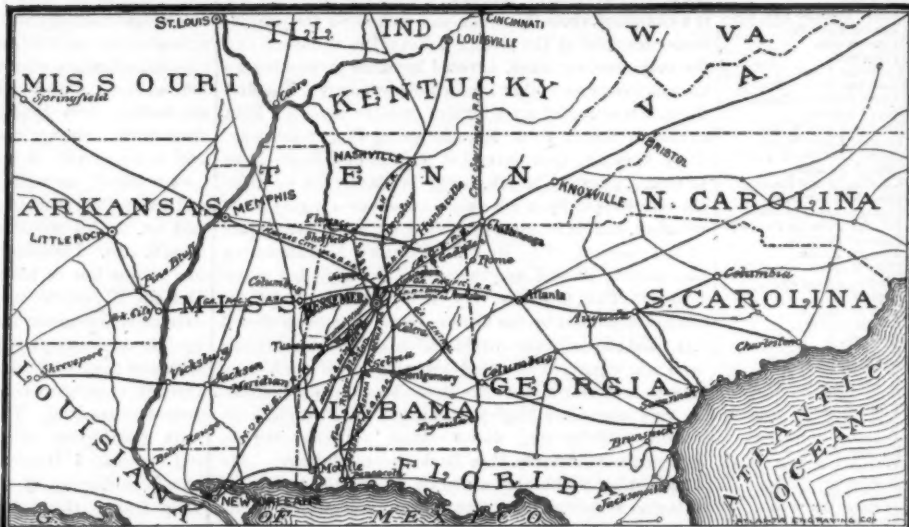
THE Southern Pacific Railroad Co. has contracted with the Cahaba Coal Mining Co., of Alabama, for 15 car-loads or 300 tons of coal daily. The shipments will be made to New Orleans for use on the Southern Pacific between that city and El Paso, Texas.

It is understood that efforts are being made to form a new steel rail pool or combination with a view to advancing prices, and the effect has already been to strengthen the market and cause a stiffening in quotations. If such a combination should be formed prices would no doubt advance very soon.

BESSEMER, ALA.

WHERE IS BESSEMER?

Located according to its latitude and longitude, Bessemer is in 33 deg. 20' North latitude and 87 deg. West longitude from Greenwich. Its position in the State of Alabama is just above its center and about midway between its eastern and western boundaries. Its position in the Southern States is a noticeably central one. It is midway between Montgomery and Decatur, between Meridian and Chattanooga, Mobile and Nashville, Savannah and Memphis, New Orleans and Louisville, all of which will readily appear from the map published herewith. So far as its geographical location is concerned it could not well be more central, more on the lines of communication and transportation between the leading and principal commercial and manufacturing centers in the South. It has lines of railway leading direct to Texas, via Vicksburg and Shreveport and via New Orleans; to Gulf ports, directly to New Orleans, to Mobile and to Pensacola; to all of the Atlantic ports and to the North, Northwest and West. No city of its age was ever so favored with so admirable, comprehensive and extensive a system of railway transportation.



THE RAILWAYS OF BESSEMER.

In an area of four blocks, nine lines of railways center:

The Alabama Great Southern R. R.
The Louisville & Nashville Min'l Line.
The Bessemer & Huntsville R. R.
The Georgia Pacific R. R.
The Kansas City, Memphis & Bessemer R. R.
The Bessemer & Tuscaloosa R. R.
The Bessemer Dummy Line (standard gauge).

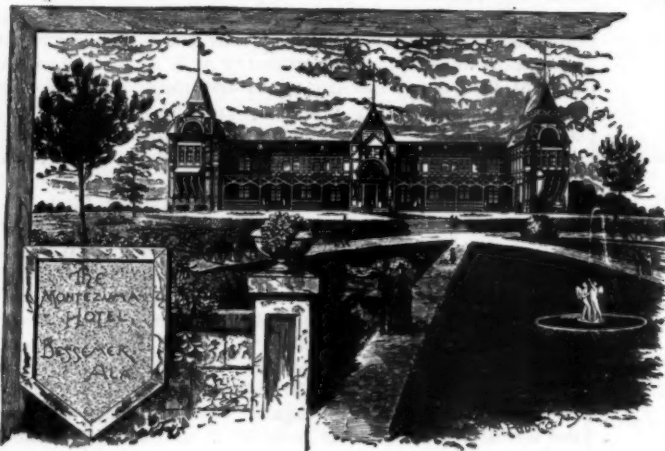
All of these lines are running to Bessemer. The Bessemer & Huntsville is completed as far as Village Springs, forty miles on the way up Murphree's Valley, with its ultimate terminal point at Huntsville. It is being rapidly extended.

The Bessemer & Tuscaloosa is completed to Woodstock, a distance of thirty miles, lacking only eighteen miles of reaching Tuscaloosa. At Woodstock this line connects with the Blocton Coal Mines Railway.

The lines of the Bessemer, Selma & Pensacola R. R. and Mobile & Bessemer R. R., now under contract and in process of construction, both center in this area.

The Sheffield & Bessemer R. R. is projected to Bessemer. It is now built as far as Jasper, forty miles northwest of Bessemer.

On the 12th of April, 1887, the first lot was sold in Bessemer; on the 15th of the following September the place was incorporated as a city, having then a population of 1,500 people. At this time, 1st September, 1888, it has a population of 3,500. It has over 400 different structures, some of them business blocks that would highly credit a city of a hundred thousand population. Over two million dollars so far have been invested in improvements. It has completed the largest rolling mill plant in the South, and two of the largest



MONTEZUMA HOTEL, 194x150, OPENED NOV. 1, 1887.

iron furnaces, extensive foundry and machine shops and planing mills. Five more iron furnaces are under contract, three of them with foundations already being laid. An enormous furnace factory, machine shops and boiler works are being located, and will construct the five furnaces mentioned. An enormous fire brick, tile and terra cotta plant is being established; has already commenced the manufacture of fire brick and will regularly employ 200 hands.

WHY DOES BESSEMER GROW SO RAPIDLY?

Because it presents opportunities for the investment of capital, the establishment of manufactories and industrial institutions and for labor, common and skilled, that are unusual and unrivalled. In Bessemer, pig iron is being made cheaper than at any other point in the United States. The iron ore, the coking coal and the limestone are almost within a stone's throw of the city. The site of Bessemer is superb, unusually attractive, unimpeachably healthy, with thorough drainage and first class water

works. It is already a leading manufacturing point, and is destined to become one of the principal manufacturing centers in the South. Schools and Churches are already established.

The illustrations are of two structures already completed, one costing \$125,000 the other \$40,000. There are a large number of similar structures in Bessemer already completed.



CHARLESTON BLOCK, 300 FEET FRONTAGE, 2D. AVE., BET. 18TH AND 19TH STREETS.

ANY INFORMATION CONCERNING BESSEMER WILL BE PROMPTLY FURNISHED BY THE

Bessemer Land & Improvement Company.

WM. BERNEY, President. H. M. McNUTT, Secretary.

SHEFFIELD, ALA.

The Iron Manufacturing Center of the South.

AT THE HEAD OF NAVIGATION, ON THE TENNESSEE RIVER, SHEFFIELD is the *natural outlet* for the mineral and manufacturing products of Alabama and neighboring States seeking a water route to points on the Ohio and Mississippi rivers, and to the Gulf of Mexico, as well as the best *distributing point* over Alabama, Eastern Mississippi and East Tennessee, South Carolina, Georgia and Florida for Northern and Western produce, groceries, provisions, machinery, &c. Three Railroads already completed and in operation, and several others assured. *Principal shops of Memphis & Charleston Railroad*, in which cars and locomotives are to be built, are under contract to be erected here. These will employ between *four hundred and five hundred mechanics*, and consequently, with their families, will make an increase in population of at least two thousand people. Shops of three other railroads are contracted to be located here, some of them being now under construction.

FIVE COMPLETED BLAST FURNACES

Have a capacity of 700 tons pig iron per day. Experts do not hesitate to say that *iron can be manufactured more cheaply* at Sheffield than at Birmingham, and its *river transportation facilities* will enable Sheffield iron to reach the principal markets at a saving of from

\$2.00 TO \$2.50 PER TON.

The quality of the iron produced is pronounced by consumers to be the best from any furnace in the South. Stove Works, capacity fifty stoves per day, now in operation. A first-class daily newspaper is regularly issued. Furniture Factory, Bottling Works, Bakery, Dummy Street Railroad, a 40-inch Morse Cotton Compress, Electric Lights, Agricultural Implement Works, 3 Steam Brick Works, 2 Hand Brick Works, 2 Steam Wood-Working Establishments, Water Works, 2 Banks, a Savings Bank, and Steam Job Printing Office already in successful operation, 15-ton Ice Machine just completed and a five story Hotel, with all modern appliances, now being erected. The Cleveland Hotel, Park House and numerous boarding houses furnish accommodations to travelers; Paint Works nearing completion. Other manufacturing establishments under consideration, among them a large Cotton Mill soon to be commenced.

Good Water. Free Public Schools and Churches. Drainage Excellent.

HEALTH AND CLIMATE UNSURPASSED.

Splendid Opening for Men of Push and Energy. No Better Point for Profitable Investment. No "OLD FOGY" Element Here.

SITES FOR MANUFACTURING ENTERPRISES,

And for Free Public Schools and Churches

Donated by Sheffield Land, Iron & Coal Company.

Population January 1st, 1887, 700; August 21st, 1887, by actual count, 2,583. Increase of population, 300 per cent. in eight months, and only limited by accommodations. Present estimate (August, 1888) fully 3,500.

Three years ago the site of Sheffield was cultivated as corn and cotton plantations, and was without a railroad. Numerous two and three-story brick business houses, and one and two-story dwellings have been, and are being erected. The class of buildings will compare favorably with those in cities of 20,000 inhabitants.

LIMESTONE of excellent quality for *fluxing iron* in unlimited quantities at the furnaces' sites. First-class building stone and brick clay abundant. Rich and extensive deposits of *brown hematite iron ore* within twenty miles, along the lines of two Sheffield railroads, which, by actual results in the furnaces, yield above 50 per cent. metal. Iron of high grade is being made with a pound of coke to a pound of metal—a result never before accomplished with Southern ores and coke. The Sheffield & Birmingham Railroad runs through the heart of the *Warrior Coal Fields*, which abound in first-class *coking, steam, gas and grate coal*. Timber is abundant and cheap.

The *Memphis & Charleston Railroad*, *Sheffield & Birmingham Railroad* and *Nashville, Florence and Sheffield* branch of the *Louisville & Nashville Railroad* are now in operation into Sheffield. Surveys of three other railroads have been recently completed to Sheffield, which will soon be the *best combined river and railroad transportation center* in the South.

Every merchant and every established manufacturing enterprise is doing a profitable business. *More are needed.* For further information address

WM. L. CHAMBERS, Vice-President and Manager,

SHEFFIELD LAND, IRON & COAL COMPANY, - - - SHEFFIELD, ALA.

ALABAMA'S GREAT MINERAL WEALTH

SURROUNDS THE

★ CITY OF TALLADEGA, ★

Which, according to statistics, is the **MOST HEALTHFUL CITY IN ALABAMA**, and the **County Seat of Talladega County.**

THE CITY HAS A POPULATION OF 6,000, AND ITS POPULATION IS RAPIDLY INCREASING.

TALLADEGA is on the main line of the E. T. V. & G. Railroad, the A. & A. Railroad, and is the present terminus of the T. & C. Railroad. Work is rapidly progressing on the Birmingham & Savannah Air Line Road, between Birmingham and Savannah, and within twelve months this road will be completed via Talladega from Birmingham to Savannah, which will place Talladega on the direct line from Birmingham to deep water on the Atlantic, making

TALLADEGA ONE OF THE BEST DISTRIBUTING POINTS IN THE STATE.

THE CITY HAS

AN EXCELLENT SYSTEM OF COMMON GRADED SCHOOLS,

With a scholastic population of 500, and **THE MOST COMMODIOUS AND ATTRACTIVE PUBLIC SCHOOL BUILDING IN THE STATE.** The main building is a three-story brick, slate roof structure, well ventilated, heated by steam; has accommodations and seating capacity for 500 pupils. This school is owned and sustained by the city. All branches of English literature, foreign languages, music, the sciences and art, are taught for a nominal tuition. Among other educational institutions are the following:

SYNODICAL FEMALE INSTITUTE, Property valued at \$50,000.

D. D. & B. INSTITUTE, Property valued at \$150,000.

BLIND INSTITUTE, (in course of construction,) property valued at \$150,000.

FOSTER COLLEGE, property valued at \$150,000.

No other city in Alabama has so many educational institutions and so many public buildings.

← TALLADEGA HAS THE MOST COMPLETE SYSTEM OF WATER WORKS IN THE STATE. →

The stand pipe has a capacity of 175,000 gallons, and into this reservoir a supply of fresh, clear, pure water is pumped every day from a large spring located in the heart of the city, which discharges over 2,000,000 gallons per day. The gravity pressure from this system is 90 pounds to the square inch in the business portion of the city. The city has broad streets, well macadamized and shaded with beautiful trees, and is well lighted with a **SUPERIOR QUALITY OF GAS.** Sixty fire plugs and forty gas lamps protect against fire and illuminate the streets.

A LARGE FURNACE PLANT gives employment to thousands of hands, and makes a high grade of chilled car-wheel iron from ores, limestone and coal within ten minutes haul by rail, or an hour's haul by wagon. **FOUR LARGE LUMBER MILLS**, with an aggregate daily capacity of 200,000 feet of lumber, cut from the long-leaved yellow Pine of this country. **FOUR BRICK YARDS** are in active operation. A SASH, DOOR and BLIND FACTORY, a FOUNDRY, MACHINE SHOP, FLOUR MILL, COTTON-SEED OIL MILL, and various other industries are in successful operation, and the TALLADEGA ICE CO. cools the thrifty population with pure ice at 50 cents per hundred. Another large furnace plant will be completed within the next ten months. A Spoke and Handle Factory and many other industries are projected, with a view to early completion.

Taxable property has increased 100 per cent. within the past twelve months. The rate of taxation is limited in the city charter to half of one per cent., and the city offers an exemption from taxation to all manufacturing enterprises for a period of ten years. The county of Talladega supplies more crude material, in the way of minerals and timber, than any other county in the State. Almost within the corporate limits of the city are extensive deposits of the highest grades of limonite ores, yielding 50 to 58 per cent. metallic iron, with only a trace of phosphorus, and limestone abounds in the greatest abundance. Coal is within twenty miles by rail.

THE TALLADEGA LAND & IMPROVEMENT CO. owns 5,000 lots suitable for residences, business and manufacturing, in and adjacent to the city. Lots are donated to manufacturing enterprises, and liberal inducements offered to actual settlers. **SPRING LAKE PARK** is owned by this company, and it is being made the most attractive resort in the State. The lake covers an area of seven acres, and is a beautiful sheet of clear spring water. Parties seeking a healthy climate, free from malaria and epidemics, and a prosperous city, are invited to visit Talladega. Address for maps, etc.

The Talladega Land & Improvement Co., **Talladega, Ala.**

DECATUR, ALA.

POPULATION.—In March, 1887, 1,200; in July, 1888, 7,000; an increase of over 500 per cent. in sixteen months.

TRANSPORTATION.—Thirty navigable rivers will be accessible by steamers from the wharves after the completion of the government works at Mussel Shoals, on the Tennessee river, in 1889. Two trunk lines of railroad are in operation at Decatur—the Louisville & Nashville, and the East Tennessee, Virginia & Georgia systems; and two more are in course of construction.

MANUFACTORIES.—There are already in operation, or nearly completed, forty manufacturing enterprises that will employ at least 3,500 skilled workmen. These will warrant a population of 20,000 in the near future.

HEALTH STATISTICS.—Death rate last year only 11 per 1,000 among the whites.

IRON.—The best grades of charcoal pig iron can be manufactured here at a cost not to exceed \$11.50 per ton.

COAL.—Coal for manufacturing purposes is now delivered in Decatur, by rail, for \$1.60 per ton. In a few months the mines up the river will deliver coal for about \$1.25 per ton.

TIMBER.—The finest timbers in the world are on the banks of the Tennessee river, adjacent to Decatur. Decatur is one of the largest hard wood producing centers in the South.

SCHOOLS AND CHURCHES.—Good school and church facilities are here already.

FARMING LANDS.—Decatur is the center of one of the finest agricultural regions in the South. The Tennessee valley produces all kinds of small grain, potatoes and fruits, as well as products characteristic of the South, such as cotton, tobacco, etc.

Review of Decatur's Growth up to July, 1888.

The following enterprises have been located in Decatur and New Decatur, Ala., since February 1, 1887, (with few exceptions) and are in full operation, except where otherwise stated:

1. The Decatur Land, Improvement and Furnace Company was organized on the 11th day of January, 1887, and has laid out the town adjoining Decatur, known as New Decatur.
2. The Louisville & Nashville Railroad Company are now (July, 1888), completing their extensive new shops for the manufacture and repair of cars and locomotives; also roundhouses, etc., the whole covering 57 acres. It is estimated that these shops will employ 1,500 men.
3. The United States Rolling Stock Company are moving their extensive car shops from Urbana, Ohio, to Decatur, where they are putting up new works, covering 49 acres, for the manufacture of every description of cars. The machinery will be in place by September, 1888. The company will employ 500 men at first, and eventually 1,000.
4. The Decatur Charcoal & Chemical Works, running 48 ovens of a capacity of 55 cords of wood each, each cord producing two gallons of wood alcohol, 50 bushels of charcoal and 125 pounds of acetate of lime. This plant has a capacity to treat about 50,000 cords of wood per annum.
5. The American Oak Extract Company, the largest plant of the kind in the world, consuming 100 cords of wood daily in the manufacture of tanning extract. The plant is now being increased by one-third.
6. A 70-ton Charcoal Iron Furnace, nearly completed and ready for operation, built by Gordon, Strobel & Laureau, of Philadelphia, on the latest improved designs. Cost \$111,000.
7. The Decatur Iron Bridge Construction Company, an immense plant with admirable machinery for building every description of railroad and other iron bridges.
8. The Ivens & Son Machine Company. Building (brick) 280 feet by 100. Manufacture boilers, engines, etc., and do all kinds of foundry work.
9. Cotton Compress (Morse, 90 inch.) built by Steers & Co., of New Orleans. Cost \$75,000, completed. The buildings are of brick and iron with stone foundation and have the largest storage capacity in the South.

10. The Decatur Car Wheel & Manufacturing Company. Capacity, 100 wheels per day at present; will be increased as fast as possible, as the company cannot now supply their orders.

11. Southern Horseshoe Nail Factory. These extensive works are being constructed, and will shortly be in operation.

12. Decatur Waterworks (both direct pressure and Holly system) now being constructed by Howland & Ellis, of Boston, Mass. There will be 38 miles of pipe, of which over one-half are laid already. The water will be turned on about September next, and Decatur will have an unrivaled water supply.

13. Moulthrop & Stevens' mammoth brick yard, occupying over 7 acres and employing 50 men, their steam machinery having a capacity of 75,000 brick per day. There are five other brick yards in Decatur, and brick can be furnished at the present time at from \$5 to \$6 per thousand.

14. H. S. Freeman's lumber mills and lumber yard. Daily capacity of mill 15,000 feet. Handles 2,500,000 shingles yearly, besides laths.

15. Arantz Brothers' saw mills and lumber yards. Operate 3 band-saws. Daily capacity of their mills 60,000 feet.

16. Decatur Lumber Company's saw mill, planing mill and dryer. A very large establishment.

17. Berthard & Company's sash, door and blind factory.

18. The Hoosier Mills & Building Company.

19. The Southern Lumber Company. Make sash, doors and blinds.

20. J. D. Jervis & Company's extensive factory for sash, doors, blinds, stairs and hardwood finish.

21. Decatur Builders' Supply Company's lumber yards and planing mills.

22. Decatur Artificial Ice Company; capacity 6 tons daily, to be increased shortly to 15 tons.

23. Decatur Cornice & Roofing Company; manufacture galvanized iron cornices and iron and tin roofing.

24. The Decatur Street Railway, running cars over 3½ miles of track. Will have 2½ miles more completed shortly. Is equipped with new rolling stock.

25. The Decatur Telephone Company, operating over 80 stations.

26. The Decatur Electric Light Co., running 30 arc lights (Brush system).

27. Grant & Company's furniture factory.

28. Decatur Building Association.

29. Bucheit's Bottling Works.

30. Decatur Printing Company.

31. Artificial Stone Works.

32. Decatur Plumbing & Supply Company.

33. Alabama Lumber & Fruit Package Company.

34. Decatur Carriage Company.

35. First National Bank. Paid up capital \$100,000.

36. Exchange Bank of Decatur. Capital \$100,000.

37. One daily and two weekly papers.

38. The new "Tavern" Hotel, in full operation, owned by the Decatur Land Improvement & Furnace Company, delightfully situated on their own grounds, magnificently furnished by the Robert Mitchell Furniture Company of Cincinnati, Ohio, with room accommodations for at least 125 guests. There are five other hotels in Decatur.

39. The Decatur Land, Improvement & Furnace Company's incandescent electric plant, furnishing lights to the "Tavern," also to stores, offices and private dwellings.

A block to contain an opera-house, stores and offices, is now being built by a joint stock company at a cost of \$60,000.

The Louisville & Nashville Railroad Company handle daily in their depot yards 640 cars, 360 going South and 280 North; employ 85 men, and pay out to employees \$6,000 monthly.

The East Tennessee, Virginia & Georgia Railway Company handle in their yards 150 to 200 cars, employ 14 men, and pay out in wages \$720 per month.

In March, 1887, the number of inhabitants in Decatur was 1,200; in March, 1888, 7,000 in Decatur and New Decatur. Since January, 1888, there have been over two hundred houses erected; many of them are substantial brick business houses.

The Decatur Land, Improvement & Furnace Company is offering most favorable terms to parties who will purchase lots for the purpose of building homes.

The capital stock of the company, by retirement of the treasury stock, is reduced to 50,000 shares, or \$5,000,000, of which 45,659½ shares have been issued and are now outstanding. It is largely held as an investment by small holders scattered through different States, very many of whom have also bought property in Decatur, and by persons engaged in business and various occupations in Decatur.

The strong financial condition of the company can best be appreciated by a perusal of its published statements of July 1st, 1888, a copy of which can be obtained from the secretary at New Decatur, Alabama.

For Maps, Illustrated Pamphlets, and Specific Information, address

The Decatur Land, Improvement & Furnace Company

NEW DECATUR, ALA.

Anniston

THE CENTER OF
Iron and Cotton Industry
AND MINERAL WEALTH.

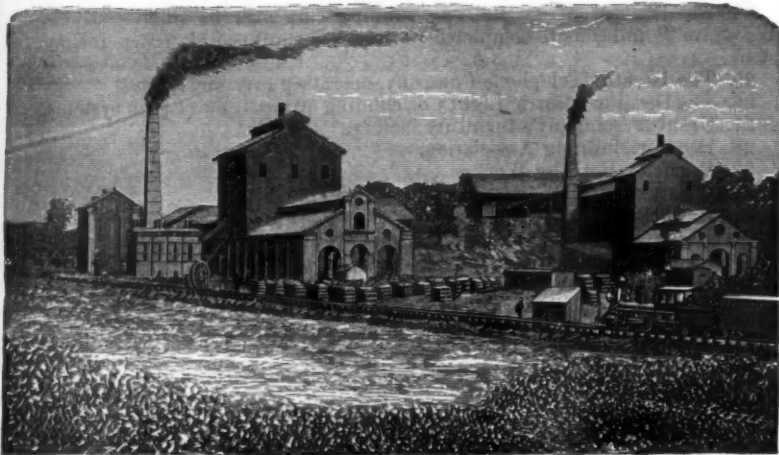
"The Model City of the South."

IT IS

The Profits of Labor only that can add to the wealth and prosperity of a nation or community. It is this only that can make business successful and profitable, sustain and add to the value of real estate.

WHERE

Nature's resources are greatest, where nature's capital in rich agricultural lands, and where iron, coal and other useful minerals are most abundant, most accessible and of superior quality for all purposes, there will capital find its safest investment, largest returns and labor reap its richest reward. It is to the Anniston District where the best professional mining engineers and experts of the United States declare the great center of the iron industry of the South will drift, where its manufacture will be most permanent and profitable, and where ores in the greatest abundance and accessibility exist, and where they will be most easily mined, that this applies.



WOODSTOCK FURNACES—ANNISTON.

The Development of the Past Fifteen Years

Confirms all this, and every year convinces the experts of the correctness of their judgment. It is no longer opinion based on scientific and practical education; it is a fact that is clearly and successfully demonstrated, so that the visitor to the Anniston District can see at every step. The four iron furnaces that have been so long and successfully operated, and the new plant now being erected, and rapidly approaching completion, which will be capable of producing one hundred thousand tons of pig iron a year, demonstrate that

NOWHERE ELSE IN THE SOUTH

Has the iron industry been so profitable and so successful, or been established on so permanent a basis, and of no district is this so universally conceded by all, while nowhere else have arrangements been perfected and already established on so complete a scale to work the crude iron into higher branches of manufacture to increase its value, and to bring into the district the profits of skilled labor. THE GREAT CAR WHEEL WORKS OF NOBLE BROS. & CO., their rolling mill and steam forge and machine shops, and the Alabama Car Works, have been absorbed by the

UNITED STATES ROLLING STOCK COMPANY,

With a capital of \$4,000,000, for the purpose of adding to and enlarging the entire plant to build TWENTY CARS A DAY. Everything that goes into the creation of a car, except the tin for the roof and the wire nails, will be created from Anniston's crude material by her labor and skill. Fifty tons of wheel iron will be made into car wheels daily, twenty tons into car axles, fifty tons of pig iron into car and other castings, and fifty tons into bar iron and bolts, making nearly ten thousand dollars per day added to the wealth of the country by profitable labor converting nature's capital to the use of man. This company have a capital of \$4,000,000, and their Anniston works will represent a cash outlay of \$1,000,000. One thousand skilled mechanics will be employed as soon as the great enlargements under way can be completed.

THE STEEL BLOOMARY

Consumes and increases the value of twenty tons of pig iron per day, while the Pipe Foundry converts to the use of man TWO HUNDRED TONS OF PIG IRON PER DAY in one of the largest and best planned and most convenient labor-saving works on this continent. The Foundry of Murray & Stevenson, Engine and Machine Works of Pinder & Co., and Boiler and Sheet Iron Works of J. & D. Noble, all add to the consumption of crude material by the creation of finished work.

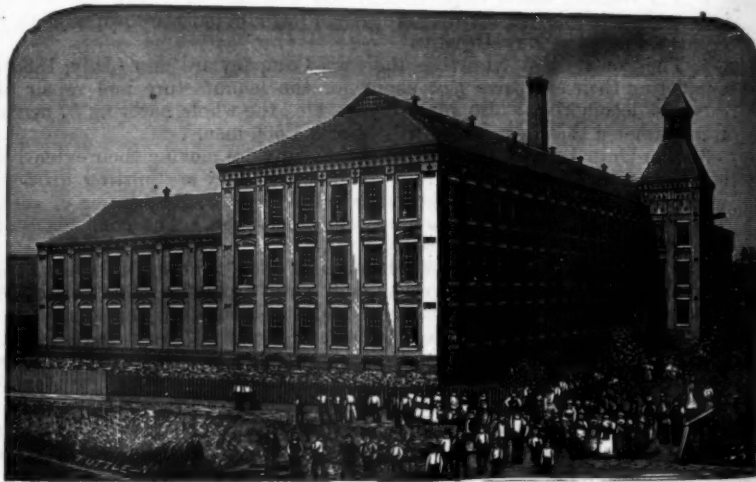
NOR IS IT TO IRON ALONE

That Anniston relies for increase of wealth and population. The Cotton Factory, with eleven thousand seven hundred spindles and three hundred and seventy-five looms, employing over three hundred and fifty operatives, adds greater value to the products of agriculture by converting six thousand bales of cotton into cotton cloth. The immense ninety-inch Morse Cotton Compress, with its brick warehouses, is fast making Anniston a cotton market and commercial center, and aiding its wholesale and retail merchants to extend and hold the trade of the country tributary to Anniston that its system of railroads has opened to them. The Georgia Pacific, the East Tennessee, Virginia & Georgia Railroad systems,

Give Direct Communication and Through Rates

To all parts of the country, while the Anniston & Atlantic Railroad, built by Anniston capital to open up new agricultural and mineral resources, gives Anniston, by connection with the Central of Georgia system, communication with the Atlantic sea coast and the new Anniston & Cincinnati Railroad, built and owned by Anniston citizens, opens up new resources and connections, and a shorter line with the great Northwest.

The proposed extension of the Anniston & Atlantic Railroad to Blocton will give another and shorter line to the great Cahaba Mines, producing the very best coal for domestic and manufacturing purposes in the South. Forty thousand acres of these coal lands, upon which a million and a half dollars have been lately spent in opening new mines and building several hundred coke ovens, ALL OWNED AND CONTROLLED BY ANNISTON CAPITAL, and developed to mine and manufacture three thousand tons of coal and coke per day, secures to Anniston for generations to come a full and certain supply of cheap fuel for all her industries, operated where a rich agricultural country can feed a manufacturing and commercial people, and where the



ALABAMA MANUFACTURING COMPANY'S COTTON MILL—ANNISTON.

Best, Healthiest and Most Invigorating Climate in the World,

With mountain air and pure water, and an elevation of nine hundred feet above tide water, insures the health and comfort of the workman and his family; where health and comfort stimulate and lighten labor, and secure to it and its industries the reward due to both. It is these advantages which have been given by nature that enabled Anniston's citizens to create her past and present prosperity, and which secure her future. It is that they may participate in and avail themselves of these advantages that Anniston invites NEW CAPITAL AND TALENT AND ENERGY from all sections. We invite all to come and see, and on the spot to judge for themselves of Anniston's great resources and possibilities. The comfort and quiet of the famous Anniston Inn will make a visit to our city a treat and pleasure. Any information, attention and courtesy will be given and shown by addressing or applying to the

ANNISTON CITY LAND CO., Anniston, Ala.

CONSTRUCTION DEPARTMENT

WE PUBLISH, every week, a list of every new factory, of what-kind, projected anywhere in the South; every railroad undertaken, and every mining company organized. This information is always fresh, and, by enabling manufacturers to correspond with the projectors of such enterprises before their supplies of machinery have been purchased, is of great value. Manufacturers will find it to their interest to read this department carefully each week.

SPECIAL reports to the MANUFACTURERS' RECORD during the week shows that with the opening of the first fall month the industrial interests of the South exhibit a very gratifying activity, both in the organization of new enterprises and the enlargements of old ones. The 15,000-spindle cotton mill reported last week to be built by the Trion Manufacturing Co., of Georgia, will cost \$300,000, and will be put up entirely out of the surplus fund of this company accumulated from the profits of their present mill; a new \$25,000 mill will also be built in Georgia. Among other noteworthy enterprises reported for the past week alone may be mentioned the opening of new coal mines at Newcastle, Ala., to increase the output of the company operating there to 1,500 tons of coal a day, and the beginning of work at the same place on 100 coke ovens. The Pioneer Mining & Manufacturing Co., of Birmingham, reported last week as to build a second furnace and a rolling mill, will also open new coal and iron ore mines. The Connellsville Coal & Coke Co., of Alabama, will build 50 coke ovens. The Cahaba Coal Mining Co., owned in Anniston, has received contract to deliver 300 tons of coal a day to the Southern Pacific Railroad for an indefinite period. A new ore mine will be opened near Gadsden to supply one of the furnaces there. Electric light works and 200 new dwellings will be built at Ensley City. A \$300,000 iron company has been organized in West Virginia; a \$500,000 gold mining company in Arkansas; a \$1,000,000 mining company in Arkansas; a \$500,000 electric company in Tennessee; \$50,000 electric light works in Augusta, Ga.; \$50,000 distillery company in Louisville; \$200,000 added to the capital of wire nail works at Covington for the construction of 100-ton rolling mill and 75 ton wire mill (double turn); a cotton compress company at Chattanooga; extensive salt works in Texas; \$50,000 tobacco warehouse in Louisville; \$50,000 paving manufacturing company in Savannah; a large furniture factory, to employ 100 hands, is to be built in Memphis, the car shop of the great works at Roanoke is to be doubled and arrangements made in the boiler and engine departments for largely increasing the production of locomotives; reports from Pensacola say that the negotiations have been closed for the investment of over \$1,000,000 by English capitalists in the purchase of saw mills and timber property; a \$600,000 company is preparing for great drainage and irrigation work in Texas; negotiations are pending for building a \$100,000 woolen mill in Dallas; South Carolina has commenced shipping kaolin to Canada; contracts have been let for building several hundred miles of railroad in different States. These are the most salient points in the industrial history of the South for one week as found in the MANUFACTURERS' RECORD of October 6. They show that the growth of new industries is not confined to any one locality, but extends over the whole South, and gives promise of still greater activity now that the exaggerated yellow-fever scare has been ended by frost and the cotton begins to move more freely.

ALABAMA.

Anniston—Pipe Works.—The Anniston Pipe Works, who are building immense pipe works, have increased their capital stock from \$200,000 to \$500,000, previously reported.

Bessemer—Rolling Mill.—The Bessemer Rolling Mill Co. have added machinery for manufacturing corrugated iron.

Birmingham—Electric Light Plant and Houses.—The Tennessee Coal, Iron & Railroad Co. will, it is stated, erect an electric light plant and build 200 houses at Ensley City.

Birmingham—Gold Mining.—R. S. Minor, Lewis S. Frierson and R. Knauff have incorporated the Anna Howe Gold Mining Co. to mine for gold and other precious minerals. The capital stock is \$500,000.

Birmingham—Warehouse.—The Jefferson County Warehouse & Wagon Co., capital stock \$10,000, has been chartered by Charles S. Smith, R. D. Smith and Thomas O. Burwell.

Birmingham—Iron Furnace, Rolling Mill, Mines, &c.—The Pioneer Mining & Manufacturing Co., Samuel Thomas, of Catasauqua, Pa., president, reported last week as having increased their capital stock to \$1,500,000, and as to duplicate their present 100-ton furnace and build a 150-ton rolling mill, will begin active work early in November. They will soon open coal and limestone mines and contemplate opening other iron ore mines. More houses will be built, &c.

Birmingham—Building.—Proposals for erecting one of the wards for the Charity Hospital will be received until October 10 by C. M. Torgerson at Bessemer.

Blocton—Coal Mining.—The Cahaba Coal Mining Co. have contracted to mine 300 tons of coal daily for the Southern Pacific Railroad Co.

Clay County—Grist Mill.—Mr. Carr is erecting a grist mill.

Connellsville—Coke Ovens.—The Connellsville Coal & Coke Co. have let the contract for 50 more coke ovens, work to be commenced at once.

Florence—Railroad.—The Florence Railroad Co., lately mentioned as chartered by W. B. Wood and others to build a railroad to the Tennessee State line, are making surveys. A similar named company has been chartered in Tennessee to continue the road toward Paducah, Ky.

Florence—Furnace, &c.—The Florence Charcoal Iron & Chemical Co. have not fully decided to build the furnace reported as contemplated.

Gadsden—Iron Mines.—The Etowah Mining Co. are preparing to commence mining iron ore. They are building houses.

Ironaton—Iron Furnace.—The Clifton Iron Co. are repairing their charcoal iron furnace. A new hearth is being put in.

Mobile—Railroad.—J. C. Clark, general manager Mobile & Ohio road, says the report this company will build from Corinth, Miss., to Birmingham, is a mistake. If the projected line is built, it will probably be by some other company.

Montgomery—Railroad.—Special meetings of the stockholders of the Alabama Midland Railway Co. will be held at Bainbridge, Ga., October 16, and Montgomery, October 22, to ratify contracts made with the Alabama Terminal & Improvement Co. the Plant Investment Co., to increase capital stock, issue bonds, &c. They will begin work at Montgomery, Troy and Ozark as well as at Bainbridge.

Montgomery—Cider and Vinegar Factory.—The Friedman Cider & Vinegar Co's works have been leased by William Tajum.

Montgomery—Electric Light Plant.—The Brush Electric Light & Power Co. are enlarging their buildings to increase the capacity of their plant.

New Castle—Coal Mines and Coke Ovens.—The Milner Coal & Railroad Co. are opening two new slopes and will put in new machinery. They have purchased new hoisting engines and pumps. They are repairing and remodeling their coke ovens and have laid foundations for 100 new ovens.

Opelika—Foundry.—John Bros., reported last week as to rebuild foundry, want to buy machinery or buy out a foundry; will erect brick building with iron roof.

Renfroe—Saw Mill and Wood-working Factory.—T. I. Cowan, of Cedartown, reported last week as to build a saw mill, will at once build it at Renfroe; also a wood-working factory. He has purchased machinery.

Selma—Street Railroad.—The Selma Street Railroad Co. will hold a meeting on October 29 to consider issuing bonds.

Strausburg—Saw Mill, &c.—J. F. Maul is rebuilding his saw mill and dry-kilns, reported last week as burned.

Troy—Barrel Factory.—The Troy Fertilizer Co. will add a barrel factory to their fertilizer works.

Tuskaloosa—Cotton Compress.—It is probable that a cotton compress will be built.

ARKANSAS.

Arkansas—Railroad.—It is stated that the St. Louis, Arkansas & Texas Railroad Co. (office, St. Louis, Mo) will relay their road with steel rails wherever needed.

Benton—Mine.—The Saline County Mining Association, previously reported as formed to develop the Rabbit Foot mine, will erect machinery.

Fayetteville—Railroad.—\$13,000 has been subscribed towards building a railroad from Fayetteville to Prairie Grove.

Fort Smith—Railroad.—L. L. Bush, A. W. Bush, Thomas Boles, W. H. Cravens and others have chartered the Kansas City, Fort Smith & Southern Railroad Co. capital stock \$3,800,000, to build a railroad from the Missouri State line to near Texarkana, 190 miles.

Little Rock—Silver and Lead Mines.—John B. Weiner, Anthony Koener and Joseph Collins are the incorporators of the Silver & Lead Mining Co., reported last week as chartered to develop the Kellogg mines near Little Rock. The authorized capital stock is \$1,000,000.

Little Rock—Building.—N. Hamlet has contracted to erect a brick building to cost \$10,000 for D. McGann.

Little Rock—Furnace.—The Bessemer Furnace & Manganese Co. are grading for the erection of their furnace, lately reported as to be built.

Newport—Stave Factory.—Morrison, Decker & Co. will put in operation their stave factory, which has been idle for a year.

Warren—Saw Mills.—A number of saw mills are being built in the county. J. H. Page can probably give names.

FLORIDA.

Bluff Springs—Saw Mill.—The Milner Lumber Co. will build a saw mill with a daily capacity of 40 M feet. John F. Milner, of Bolling, Ala., is president of company.

Palatka—Grist Mill.—Vertres & Co. will erect a grist mill.

Pensacola—Lumber Mills.—It is stated that arrangements have been about completed for the purchase, previously reported, of the saw mills and timber lands of the Muscogee Lumber Co., Seminole Lumber Co. and Robinson Lumber Co. by a foreign

syndicate with a capital of \$1,500,000 or \$2,000,000.

GEORGIA.

Americus.—The Sumter Real Estate & Improvement Co., capital stock \$50,000, has been chartered by C. M. Wheatley, W. E. Murphy, H. C. Bagley and others.

Athens—Canning Factory.—A canning factory is reported to be started.

Athens—Iron Foundry.—R. Lucas, of Philadelphia, Pa., will start an iron foundry.

Athens—Electric Lights.—The Athens Manufacturing Co. are arranging to put electric light machinery in their cotton factory.

Athens—Ice Factory.—Northern parties will, it is stated, purchase the old ice factory and put it in operation.

Atlanta—Soap Factory.—P. H. Lawslea writes us that the report that he would start a soap factory is incorrect.

Augusta—Electric Light Plant.—C. H. Phinizy, C. H. Oetjen and Frank E. Fleming, of Augusta, and others have formed the Thomson-Houston Electric Co. to erect an electric light plant. The capital stock is \$50,000, paid in.

Augusta—Bridge.—The contract for rebuilding the foot-bridge across the Savannah river has been let to T. A. Hardeman, of Cincinnati, O., at \$10,005. It will be completed in about two months.

Augusta—Canal.—The contract for repairing the Augusta canal, lately mentioned as damaged by a flood, has been let to T. B. Redmond, of Rome, at \$27,525.

Brick Store—Oil Mill.—A company with a capital stock of \$3,000 has been formed to establish a cotton-seed oil mill, and have commenced work on buildings. E. Elliott or J. T. Taylor are interested and can give information.

Brunswick—Cotton Compress.—The Pioneer Compress & Storage Co. are now putting up the machinery for their cotton compress, previously reported as to be built.

Canton—Wood-working Factory, &c.—McAfee & Tolbert are erecting a wood-working factory at their flour mill, and will add a cotton gin later.

Cartersville—Furnace.—Contracts for grading and trestle work for branch road for the Cartersville Steel & Furnace Co. have been let to Eugenius A. Nisbet. The company has about closed contract for 1,500,000 bricks for building their furnaces.

Forsyth—Cotton Mill.—The Forsyth Manufacturing Co., capital stock paid in \$25,000, has been organized by J. M. Ponder, John L. Ponder and C. A. Ensign to manufacture cotton goods.

Gabbettsville—Grist Mill.—L. H. Traylor & Co. contemplate building a grist mill, but it will depend upon condition of the crops.

Lime Branch—Railroad.—Depoister & Taliaferro, lately mentioned as leasing and to develop the iron ore beds of Mrs. Wray, will construct a road 4 miles long to connect with the Chattanooga, Rome & Carrollton Railroad. Rails will be furnished by the railroad company.

Louvale—Railroad.—The Americus, Preston & Lumpkin Railroad Co. (office, Americus) are making arrangements to extend their road (narrow gauge) from Louvale to Montgomery, Ala.

Macon—Publishing.—J. H. Estill, of Savannah; C. E. Campbell, H. F. Estill and Frank G. Bell have organized the Macon Telegraph Printing Co., capital stock \$60,000, to continue publishing the Telegraph, &c.

Montezuma—Bridge.—A bill will be introduced in the next session of the legislature

at Atlanta to authorize Montezuma to issue \$15,000 of bonds to build a bridge. H. L. Hill can give information.

Newnan—Depot.—The Atlanta & West Point Railroad Co. contemplate building soon a depot to cost about \$5,000.

Puckett Station—Depot.—The Atlanta & West Point Railroad Co. will build a depot to cost \$5,000.

Reynolds—Cotton Mill.—E. B. Waters, of Elmira Cotton Mills, previously reported as to put in additional machinery, will spend \$20,000 to \$25,000 in improvements, including an electric light plant. He will organize as the Taylor Manufacturing Co., with capital stock of \$35,000.

Sandersville—Bottling Works.—The late report that bottling works were to be started is probably incorrect.

Savannah—Asphalt Works.—The Southern Vulcanite Paving Co. has been formed to establish the asphalt works previously reported and will erect them at once. The works will cost \$20,000, and the capital stock of the company is \$50,000.

Tallapoosa—Iron Furnace, &c.—The Tallapoosa Furnace Co. have lately purchased mineral and timber lands. Work is progressing on their furnace.

Toccoa—Wood-working Factory.—T. S. Davis is enlarging his planing mill, and will add machinery for making stairs, mantels, chairs, plow stock, &c. Wants chair machinery.

Trion Factory—Cotton Factory.—The additional cotton mill reported last week as to be built by the Trion Manufacturing Co. will cost \$300,000. The capacity will be 15,000 spindles and 342 looms. The capacity of present mill is 8,456 spindles and 258 looms.

Tunnel Hill—Gin.—C. A. Hunt has erected a cotton gin.

Watkinsville—Chair Factory.—Davis Hodge will move his chair factory from Burnt Factory to Watkinsville.

West Point—Electric Light Plant.—The Planters' Oil & Manufacturing Co. will erect an electric plant of 500 lights capacity.

KENTUCKY.

Birdsville—Coal Mine.—The Birdsville Coal & Improvement Co., lately organized, are opening a coal mine.

Bowling Green—Railroad.—The Bowling Green, Hartford & Ohio River Railroad Co. will at once make surveys for their road. They contemplate building also from Bowling Green to Chattanooga, Tenn. Laban M. Rice, of Evansville, Ind., is president.

Covington—Tile and Pottery Works.—The Arlington Tile Co., capital stock \$25,000, has been incorporated by Edmund T. Sheehy, J. O. Jenkins and others to manufacture tiles and pottery.

Covington—Wire Nail Works.—The American Wire Nail Co. have increased their capital from \$100,000 to \$300,000 and will add a rod mill of 100 tons capacity and a wire mill of 75 tons capacity, double turn. They are to be completed next February.

Greenup—Cooper Shop.—The Greenup Milling Co. have established a cooper shop to make barrels for their own use.

Kentucky—Bridge.—The Cairo & Tennessee River Railroad Co. have been granted permit by Congress to build a bridge over the Tennessee river in Kentucky.

Lexington—Sewerage System.—A sewerage system is reported as contemplated. The mayor can give particulars if anything is done.

Louisville—Distillery.—Philip Stitzel, Frederick Stitzel and Jacob Stitzel have chartered the Stitzel Bros. Co., capital stock \$50,000, to manufacture and distill whiskeys, &c.

Louisville—Tannery.—The Ohio Falls Oak Leather Co. will probably at once rebuild their large tannery reported in this issue as burned; loss \$100,000.

Louisville—Warehouse.—The Phoenix Storage Co. have let contract for a six-story brick warehouse, 105x263 feet, to be erected at Ninth and Main streets. It will cost about \$50,000.

Louisville—Cotton Mill.—The Louisville Cotton Mill Co., who are building a cotton mill, as previously reported, will increase their capital stock from \$200,000 to \$250,000. Two of their four buildings are ready for roof. The capacity will be 10,400 spindles.

Louisville—Medicine Factory.—The capital stock of the E. Bull Medicine Co. has been increased from \$5,000 to \$25,000.

Louisville—Bagging Factory.—The Louisville Bagging Co. will build a two-story addition, 119x71 feet, to their bagging factory, and have let the contract to Lanus & Muster.

Madisonville—Coke Ovens.—The Reinicke Coal Co., lately reported as contemplating building coke ovens, is considering the matter, but has not fully decided yet.

Owensboro—Buildings.—J. C. Rudd has decided not to build a hotel, as previously mentioned, but will erect 2 two-story brick store buildings.

Pineville—Saw Mill.—B. F. Culver & Co. have completed their saw mill, previously mentioned, and contemplate adding a band saw mill next spring. The capacity is 12 M feet per day.

LOUISIANA.

Alexandria—Well.—The New Orleans Artesian Well Works Co., of New Orleans, have contracted to sink an artesian well.

Bayou Sara—Railroad.—The Louisville, New Orleans & Texas Railroad Co. (office, Memphis, Tenn.) have purchased the West Feliciana Railroad and will, it is stated, extend it to their main line between Wilson and Baton Rouge.

Charenton—Saw Mill.—The Charenton Saw Mill Co. has been formed by A. Wolford, A. Veeder, A. F. Wolford and Anatole Verret.

New Orleans—Railroad.—It is claimed that the money has been secured for the construction of the projected railroad from Kansas City to New Orleans.

New Orleans—Saw Mills.—The New Orleans Furniture & Coffin Manufacturing Co. and Seiler & Schlingwein are thinking of building saw mills, unless they can secure lower rates for sawing lumber.

New Orleans—Jetties.—Proposals for continuing construction and repairs of jetties at harbor at Sabine Pass, Texas, will be received until October 9 by W. L. Fisk, captain of engineers U. S. A. Amount available is \$225,000.

New Orleans—Planing Mill.—D. A. Hackney, reported last week, is erecting a new planing mill on Julia street.

Tangipahoa—Saw Mill.—M. S. Newsom Sons, lately reported as to enlarge their saw mill, will increase their capacity to 40 M feet daily. Will commence doing so at once.

Thibodaux—Canning Factory.—A canning factory will be started.

MARYLAND.

Baltimore—Buildings.—John Heaver will build 5 three-story dwellings; Chas. Milske, 5 two-story dwellings.

Baltimore—Electric Light Works.—The Brush Electric Lighting Co., previously reported as to enlarge their works, have received permission to erect an additional building.

Baltimore—Furniture Factory.—The lower part of the five-story warehouse reported last week as to be erected on West Pratt street by Bagby & Rivers will be used as a furniture factory.

Baltimore—Rock Crusher.—The city is erecting machinery on the Edmondson avenue road for crushing rock to be used for macadamizing streets, &c. A 40 horsepower engine will be used.

Baltimore—Buildings.—William G. Taylor will erect 4 two-story brick buildings at Westfall Place and Ohio avenue.

Brooklyn—Lumber Mill.—Budesheim & Mewshaw will rebuild their lumber mill, reported in this issue as burned. Will have to purchase all new machinery.

Cumberland—Soap Factory.—The Knights of Labor Soap Factory will probably be enlarged.

Ellicott City—Bridge.—The Baltimore & Ohio Railroad Co. (office, Baltimore) have contracted for stone for their new bridge across the river.

Oakland—Coke Ovens.—The Oakland Coal & Coke Co. are building coke ovens at their mines, 6 miles from Oakland.

Oakland—Railroad.—Surveys are being made for a railroad projected to extend from the Baltimore & Ohio, near Oakland, to a point on the Pittsburgh branch of same road at Confluence, Pa.

Washington, D. C.—Car Yard.—The Baltimore & Ohio Railroad Co. are fitting up the old Germania Park property to use it as a car yard.

Washington, D. C.—Flour Mills.—The Foundry Flour Mills have been sold to Robert B. Tenney for \$5,900.

Washington, D. C.—Buildings.—J. W. Swamison will erect a \$5,000 dwelling at 209 Maryland avenue, northwest, to cost \$5,000, and Geo. Truesdell, a frame dwelling to cost \$4,000.

Washington, D. C.—The Electro-Magnetic Boiler Cleaner Co., at a meeting to be held on October 23, will consider increasing their capital stock from \$12,000 to \$500,000, for the purpose of purchasing the rights and franchises of the Electric Boiler Cleaner Manufacturing Co., of Quincy, Ill.

MISSISSIPPI.

Corinth—Planing Mill.—M. S. Ketchum will put additional machinery in his planing mill.

Vicksburg—Machine Factory.—J. P. Roach, D. Mayer, C. J. Edwards, J. B. Mattingly and Marye Dabney have formed the J. P. Roach Manufacturing Co., to manufacture the Roach cotton worm destroyer. The capital stock is \$100,000, of which \$50,000 is to be subscribed when business is commenced.

NORTH CAROLINA.

Cumberland—Cotton Mill.—The Cumberland Mills want to purchase 10 36-inch cotton cards, 2 drawing frames, 2 twistors, 3 to 3½-inch ring, and 500 spindles, 2-inch ring, second-hand.

Durham—Tobacco Factory.—J. S. Carr is organizing one of the companies previously reported as likely to build a plug tobacco factory.

Fayetteville—Cotton Mill.—J. P. Thompson, president of the new cotton mill, previously reported as having gone North to purchase machinery, has contracted for it.

Gamewell—Tobacco Factory.—L. H. Tuttle and others, reported as to establish a tobacco factory, will operate as the Gamewell Tobacco Manufacturing Co.

Goldsboro—Rice Mill.—The Goldsboro Lumber Co. have erected machinery for cleaning rice.

Greensboro—Bank Building.—The National Bank of Greensboro, previously reported as to erect a bank building, has commenced work on it.

Liberty—Cotton Mill.—A stock company has been formed to build a cotton mill of 1,000 spindles capacity for manufacturing coarse yarns. The mill will be 44x80 feet, boiler and engine room 30x30 feet, and picker room, 30x40 feet, all one story. Good second-hand machinery is wanted. Address Burgess Bros.

Murphy—Mineral Lands.—The Cherokee Marble & Iron Co. will soon begin the development of their mineral lands.

Pineville—Cotton Mill.—The Pineville

Cotton Mill Co., capital stock \$100,000, previously reported, have arranged to commence building at once. John W. Miller, of Charlotte, N. C., is president.

Raleigh—Paper Mill.—Efforts are being made to establish a paper mill.

Red Springs—Sash, Door and Blind Factory.—A sash, door and blind factory will be started at cost of \$2,000.

SOUTH CAROLINA.

Blackville—New Town.—A new town will be laid out on the Blackville, Alston & Newberry Railroad, 30 miles from Blackville, to be called Sievern.

Edgefield—Depot.—The Charleston, Cincinnati & Chicago Railroad Co. (office, Rock Hill) will build a depot.

Greenville—Cider and Vinegar Factory.—J. C. Boyd has ordered machinery for a cider and vinegar factory to be known as the Greenville Fruit Cider & Vinegar Works.

Spartanburg—Gas and Electric Works.—The Spartanburg Gas, Electric Light & Power Co., previously reported as intending to remodel the old gas works and establish electric light plant, are purchasing machinery.

TENNESSEE.

Athens—Church.—The Baptists are preparing to build a brick church.

Chattanooga—Cotton Compress, &c.—John A. Hart, M. H. Clift, M. Grant, H. W. Grant and R. E. Ulbricht have chartered the Chattanooga Compress Co. to erect a cotton compress, warehouse, &c.

Chattanooga.—The Pennock Battery Electric Light & Improvement Co. has been incorporated by Geo. B. Pennock, of Brooklyn, N. Y.; A. M. Pennock, of Chattanooga, and others to establish electric light and power plants, &c.

Chattanooga—Plow Works.—The Chattanooga Plow Works, previously reported as to enlarge, will increase capacity about one-third.

Cumberland Gap.—It is stated that the hotel previously reported as to be erected by the American Association (Limited), of Knoxville, will be 300x300 feet. Plans have been prepared, but work will not be commenced at present.

Jonesboro—Depot.—The East Tennessee, Virginia & Georgia Railroad Co. (office, Knoxville) are building a new depot.

Knoxville—Sash and Door Factory.—The Knoxville Lumber Co., recently reported as to build a sash and door factory, &c., are now putting in machinery.

Knoxville—Street Railroad.—The Mabry Belle Avenue Street Railroad Co. will extend their road.

Knoxville—Marble Quarry.—The Hercules Marble Co. has been chartered.

Memphis—Bridge.—Work has been ordered to be commenced on the foundation for the west pier of the bridge previously reported to be built across the Mississippi river. J. H. Sullivan can give particulars.

Memphis—Furniture Factory.—R. L. Goyer, F. H. Gordon, R. J. Black, J. P. Jordan and others have chartered the Memphis Furniture Co. to manufacture all kinds of furniture. They have commenced work on a factory and will employ 100 hands at first.

Polk County—Gold Mine.—John H. Sutherland, of Murphy, N. C., contemplates soon developing a gold mine.

South Pittsburg—Stove Works.—The Perry Stove Works, whose works were recently burned, are now receiving bids for rebuilding. They will erect three brick buildings at a cost of about \$25,000 or \$30,000, and, it is reported, will roof them with tar and gravel or tin.

Winchester—Wood-working Factory.—A new company has been formed to succeed the Winchester Manufacturing Co., lately assigned, and operate their wood-working factory. More capital will be added.

TEXAS.

Amarillo (P. O. Clarendon).—Water Works.—Glidden & Sanborn will put up a 10,000-gallon tank, piping, &c., for furnishing water.

Amarillo (P. O. Clarendon).—Brick-yard.—Martin Byrnes, contractor for building the courthouse and jail, has started a brick-yard.

Atlanta.—Coal Mines.—The capital stock of the company reported last week as formed to develop coal mines will be \$100,000. A shaft is being sunk. Dr. S. J. Morris is interested.

Austin.—The Ledbetter Co-operative Lumber Association, Patrons of Husbandry & Farmers' Alliance, capital stock \$50,000, has been chartered by J. C. Coona, Robert R. Torno and others.

Austin.—Hotel.—The Capitol Hotel Co., capital stock \$50,000, has been chartered by W. M. Robertson, W. J. Roseborough, E. J. Fry, R. C. Garrett and C. A. Ginnocchio.

Beaumont.—Lumber Mill.—The Texas Tram & Lumber Co. are putting in their mill a new Corliss engine and have added a lumber elevator.

Beaumont.—Lumber Mill.—The Long Manufacturing Co. have put a large new engine in their lumber mill.

Beaumont.—Lumber Mill.—The Reliance Lumber Co. have added a sizer to their lumber mill, are improving their tramway, &c., and will soon build a large wharf. They are building a new boom at Sweatman's Bend.

Colorado.—Salt Works.—The company previously reported as having purchased land for establishing salt works have ordered boring machinery and will let contract for making a 1,200-foot well. The Panhandle Machinery & Improvement Co. are interested.

Dallas.—Railroad.—The Missouri Pacific Railroad Co. (office, St. Louis, Mo.) will soon begin work on their Dallas and Waco branch.

Dallas.—Woolen Mills.—Moen & Co., Eastern manufacturers, are negotiating to build a woolen mill to cost about \$100,000.

Dallas.—Residences.—G. N. Quillman will build a \$7,000 residence at Oak Cliff; John Fisher, a \$6,000 residence; G. N. Aldredge, a \$10,000 residence; W. J. Adams, a \$10,000 residence; T. C. Young, a \$4,000 residence, and R. F. Eisenlohr, a \$10,000 residence.

El Paso.—Hotel.—Lucius M. Sheldon, of Brooklyn, N. Y., will, it is reported, shortly commence work on a large hotel of 150 feet front.

El Paso.—Smelting Plant.—The International Smelting Co. will probably soon begin enlarging their plant, previously reported.

El Paso.—Mine.—J. C. Carrera has leased the Bennett ore mine and will develop.

El Paso.—Canal.—The Rio Grande Valley Irrigation Co., lately mentioned, contemplate building a canal to cost \$500,000. The right of way is being secured. The company has a capital stock of \$200,000, to be paid in as work progresses.

El Paso.—Canals, &c.—The Pecos Irrigation & Investment Co., lately organized to reclaim and develop agricultural lands by building canals, &c., are preparing to commence work. Their capital stock is \$500,000. L. P. Bradley is interested.

Fort Worth.—Railroad.—The Fort Worth & Western Railroad Co. have, it is stated, let the contract for building 200 miles of their road.

Fort Worth.—Collar and Bagging Factory.—The Fort Worth Moss Collar Co., whose collar and jute bagging factory is reported in this issue as burned, loss \$25,000, will rebuild, probably on a larger scale.

Marshall.—Rope Factory.—A. Van Hook is thinking of starting a cotton rope factory, but has not yet fully decided to do so.

San Angelo.—Railroad.—It is reported that the St. Louis, Arkansas & Texas Rail-

road Co. (office, St. Louis, Mo.) contemplate building an extension of their road from Leon Junction to San Angelo.

Victoria.—Railroad.—Ricker, Lee & Co., of Galveston, have received the contract to build the extension of the Southern Pacific Railroad from Victoria to Beeville, 57 miles, previously reported, and have commenced work.

VIRGINIA.

Abingdon.—Building.—The lowest bid (\$55,365) for erecting the building for the U. S. Government, previously reported, has been made by Bright & Humphrey, of Washington, D. C.

Fortress Monroe.—Buildings.—Proposals for erecting one double set of employees' quarters and repairing various buildings will be received until October 20 by Charles W. Hobbs.

Lovely Mount.—Knitting Factory.—The Radford Knitting Co. contemplate erecting a new factory, two stories, to increase their capacity.

Lynchburg.—Iron Furnace.—A party from Cleveland, O., is reported as prospecting with a view to building an iron furnace at some point in Virginia.

Norfolk.—Canal.—The Dismal Swamp Canal Co. have contracted with W. A. Blodgett to widen and deepen their canal.

Richmond.—Gas Works.—The contract previously reported as to be let for enlarging the gas works has been awarded to Henry White at \$18,307.95, and to include brick building with iron roof, six benches of six retorts each, necessary iron work, &c.

Roanoke.—Hotel.—The hotel previously reported to be built by William H. Felix, of Buchanan, will cost about \$17,000. He will commence work this fall.

Roanoke.—Machine Works.—The Roanoke Machine Works, reported last week as grading for an addition to their car shop, will double it in size; also increase the capacity of their machine and boiler departments.

Roanoke.—Bridge Works.—It is reported that the Philadelphia Bridge Co., of Philadelphia, Pa., mentioned last week as to receive a site for the location of their bridge works, will commence at once to build.

Salem.—School Building.—Contract has been let for an \$8,000 school building.

Winchester.—Railroad.—The Cumberland Valley Railroad Co. (office, Chambersburg, Pa.) previously mentioned as to extend their road from Martinsburg, W. Va., to Winchester, Va., 23 miles, have let the contract for the part in Virginia to King & Wetherell, of Pottsville, Pa., and the contract for the part in West Virginia to Rickets & Kerns.

WEST VIRGINIA.

Black Band.—Mining, &c.—The Black Band Mining & Manufacturing Co. has been chartered to mine iron ore, coal, &c., manufacture coke, &c., by Edward M. Farnsworth, of Revere, Mass.; F. R. Shattock, Boston, Mass.; A. M. Woodrige and others. The capital stock authorized is \$300,000.

Charleston.—Depot.—The Newport News & Mississippi Valley Railroad Co. (office, Richmond, Va.) are spending about \$15,000 in improving their depot, &c.

Charleston.—Hall.—The West Charleston Joint Stock Co. have commenced work on a two-story building, 40x60 feet, to be used as a hall.

Grafton.—Machine Shops.—The Baltimore & Ohio Railroad Co. (office, Baltimore, Md.) are reported as negotiating for 10 acres of land with a view to building a new wood working shop and enlarging their foundry.

Parkersburg.—Saw Mills.—The Parkersburg Mill Co., lately mentioned as erecting a band saw mill, have remodeled their old mill, putting in new boilers, engines and two saw mills—one circular and one band. Their capacity daily will be from 75 to 100 M feet. Have erected dry-kiln also.

Treadelphia.—School.—J. A. Holliday & Son, of Wheeling, have the contract to erect a two story brick school building, 45x49 feet, to cost \$5,400.

Wheeling.—Bridge.—J. H. Lancaster, clerk Board of Public Works, will receive proposals till October 8 for building a temporary bridge over Wheeling creek.

Wheeling.—Bridge.—The Union Bridge Co. will, it is stated, resume work on the building of their bridge across the Ohio river, previously reported. R. H. Cochran can give particulars.

Wheeling.—Bridge.—Proposals for building the temporary bridge over Wheeling creek at Main street, previously reported, will be received until October 8 by the Board of Public Works.

BURNED.

Beaufort, S. C.—The gin of Mr. Politzer damaged by a boiler explosion.

Brooklyn, Md.—Saw mill of Meushaw & Budesheim; loss \$3,000. Will be rebuilt.

Burkeville, Va.—The sumac and bark factory of Campbell & Co.; loss \$25,000.

Charleston, S. C.—The Combahee Rice Mills damaged by a boiler explosion.

Claremont, Va.—The Herald printing office.

Eastman, Ga.—The gin of James Bohannon.

Eufaula, Ala.—The gin of Fitz W. Smith.

Fort Worth, Texas.—The wagon factory of Ketchum & Barton; loss \$10,000.

Fort Worth, Texas.—The moss collar and jute bagging factory owned by the Fort Worth Moss Collar Co.; loss \$25,000. Will rebuild at once, probably on a larger scale.

Hartford, Ky.—The saw mill of B. Kuykendall damaged by a boiler explosion.

Letohatchie, Ala.—Gin and grist mill of W. A. Brown.

Louisville, Ky.—The Ohio Falls Oak Leather Co.'s tannery; loss \$100,000. Will be rebuilt.

Memphis, Tenn.—The mill of the Chelsea Lumber Co.; loss \$9,000.

Paducah, Ky.—The saw mill of Clem Childs, 9 miles from Paducah; loss \$1,500.

Port Gibson, Miss.—The gin of S. C. Humphreys.

Selma, Ala.—The mill and ginney of Stone & Co. wrecked by a boiler explosion.

Enlarging Cotton Mill.

REYNOLDS, GA., Sept. 25, 1888.

Editor Manufacturers' Record:

I have associated Major J. F. Hanson, of the Bibb Manufacturing Co., Macon, Ga., with me. We have applied for charter for Taylor Manufacturing Co., capital stock \$35,000, with privilege of \$100,000. We are putting in combination picker and lapper, 12 new cards, railway heads, drawing, slubbers, speeders, frames, twistors, reels, &c., to work three bales cotton per day, electric light plant, &c. We will spend \$20,000 to \$25,000 on the old mill.

B. B. WATERS.

Contemplate Enlarging Factory

RADFORD, VA., Sept. 29, 1888.

Editor Manufacturers' Record:

The Radford Knitting Co. has been organized for about nine months and operating on a small scale. We now contemplate erecting a two story building and increasing capacity.

H. W. SHELLEY, Secy.

Planing Mill.

NEW ORLEANS, LA., Sept. 28, 1888.

Editor Manufacturers' Record:

I am erecting a new planing mill, and will carry on lumber manufacturing, &c.

D. A. HACKNEY.

MACHINERY WANTED.

If you desire to purchase machinery of any kind consult our advertising columns, and if you cannot find just what you wish, send us particulars as to the kind of machinery needed. We will make your wants known free of cost, and in this way secure the attention of machinery manufacturers throughout the country. You will thus get all information desired as to prices, etc.

Boiler and Engine.—The Hagerstown Manufacturing Co., Hagerstown, Md., want to purchase a 50 horse-power boiler and engine.

Bridge.—Proposals for erecting a temporary bridge at Wheeling, W. Va., will be received until October 8 by the Board of Public Works. Plans, &c., furnished on application.

Bridge.—W. F. Hill, Little Rock, Ark., will receive proposals until October 13 for building four bridges, each about 100 feet long.

Cotton Mill Machinery.—Burgess Bros., Liberty, N. C., want to purchase good second-hand machinery to erect 1,000-spindle cotton mill for manufacturing coarse yarns.

Cotton Mill Machinery.—Wanted by the Cumberland Mills, at Cumberland, N. C., 10 36-inch cotton cards, two drawing frames, two twistors 3 to 3 3/4-inch ring, and 500 spinning spindles, 2-inch ring, second-hand, but must be in excellent order.

Foundry and Machine Shop Tools.—John Bros., Opelika, Ala., want to purchase 36 or 40-inch cupola, 30-inch x 12-foot lathe, 24x 24-inch x 8 or 10-foot planer, cupola fan, small planer, &c., or to buy out some foundry for sale.

Furniture, &c.—Sealed proposals for furnishing the new capitol at Austin, Texas, previously reported, will be received until October 27 by the capitol furnishing board. The contract will be awarded under four separate bids, as follows: 1. The floor coverings, consisting of Wiltons, Brussels, rugs, linoleum, matings, etc.; a separate and distinct bid. 2. The wooden furniture, consisting of chairs, tables, desks, bookcases, settees, cuspidors, opera chairs, clocks, etc.; a separate and distinct bid. 3. The iron and steel furniture, consisting of roller shelving, bookcases, document files, pigeon-holes, vault fixtures, etc.; a separate and distinct bid. 4. The draperies, consisting of curtains, fringes and other ornaments; a separate and distinct bid. Specifications of all articles and classes of furniture to be bid on can be seen at the office of the board at any time.

Iron Hooping, &c.—The Greenville Red Cedar Works, Greenville, Ala., want to purchase iron hooping, ears, rivets and wire used in manufacturing wooden buckets.

Lumber Mill Machinery.—Budesheim & Meushaw, Brooklyn, Md., will purchase machinery to rebuild burned lumber mill.

Materials for Boiler Machinery, &c.—Bids will be received till October 31 by the Secretary of the Navy, Washington, D. C., for furnishing certain material for use in construction of boilers, &c.; machinery for steamship Monadnock, including pig iron, steel boiler plate, steel shapes, steel rivets, &c. Printed schedules, &c., can be obtained.

Proposals for the construction of one double set of employees' quarters and for repairs to various buildings will be received by Lieutenant Charles W. Hobbs, Fort Monroe, Va., till October 20.

IF you are thinking of enlarging your mill, factory or mine, or of purchasing machinery of any kind, send us a postal card giving character of machinery desired.

Wagon and Tobacco Factories.

RALEIGH, N. C., Sept. 27, 1888.

Editor Manufacturers' Record:

At the last meeting of the Chamber of Commerce as to the wagon factory, the amount of stock, \$15,000, was taken, and the wagon factory will be in running order by spring or before. Our plug tobacco factory is not so far advanced, but we have one-third of the stock taken.

GEO. W. POE.

RICHMOND, VA., Sept. 29, 1888.

Editor Manufacturers' Record:

The Richmond & Seven Pines Railroad is now under construction, and will be completed early next month. It will run from this city to the battle field of Seven Pines and Fair Oaks, where the company will have a park and hotel, &c. A. G. Babcock, president; Thomas B. Murphy, secretary and treasurer. F. W. Childs, of New York contractor. A. L. JOHNSON, Chief Engineer.

To Build Hotel.

BUCHANAN, VA., Oct. 1, 1888.

Editor Manufacturers' Record:

I expect to build a hotel in the city of Roanoke, Va., corner High and Jefferson streets, this fall and winter, to cost about \$17,000.

WM. H. FELIX.

Will Rebuild Mill.

BROOKLYN, MD., Oct. 1, 1888.

Editor Manufacturers' Record:

Our lumber mill and machinery were totally destroyed by fire. Expect to begin rebuilding in a few weeks. Will have to replace all machinery.

BUDESHEIM & MEUSHAW.

Improved Lumber Mill.

PARKERSBURG, W. VA., Oct. 1, 1888.

Editor Manufacturers' Record:

We have about completed the changing or remodeling of our old mill, putting in new boilers, engines and two saw mills complete, a large circular band, run by steam feed, and all late improvements in machinery; also a Sturtevant dry-kiln. When the mill gets down to running the capacity will be from 75,000 to 100,000 feet per day of 10 hours.

PARKERSBURG MILL CO.

Tobacco Factory Contemplated

DURHAM, N. C., October 2, 1888

Editor Manufacturers' Record:

We are about to organize a tobacco factory. Have not succeeded as yet.

J. S. CABE.

Foundry or Foundry Machinery Wanted.

OPELIKA, ALA., Sept. 26, 1888.

Editor Manufacturers' Record:

We were burned September 20; loss \$6,000; insurance \$2,400. Expect to rebuild—brick building, iron roof. Open for best prices for 36 inch or 40-inch cupola, 30-inch x 12 foot lathe, 24x24 inch x 8-foot or 10 foot planer, cupola fan and smaller lathes. Would like to hear from some foundry for sale or wanting partner.

JOHN BROS.

MANAGERS of mills, factories, furnaces, mines, etc., and parties starting manufacturing enterprises, and needing machinery or supplies of any kind, will find it profitable to consult the advertising columns of the MANUFACTURERS' RECORD. Its pages contain names of the best houses in the country among manufacturers of and dealers in machinery and mill supplies.

Are You Going to Augusta?

In a little more than a month this year's only national exposition will open in Augusta, Georgia. Are you preparing to go? If not, then get ready. Go by all means. If you are a capitalist you will learn there, as you can nowhere else, the diversity of the natural wealth of the South, and the places from whence the specimens of native wood, of ores, of coal, of marbles, granites and clays were brought. If you are a farmer or a horticulturist you will see the products of many sections and of a variety of soils and climates, and can learn what it costs to cultivate them, what is the yield per acre and what the value of land. You may be a manufacturer desiring to extend your market. In that case make application for space at once, and then take your goods there for exhibition. Atlanta in 1881 opened the door to Southern trade to scores of Northern houses which have been repaid many times over for their outlay. Augusta will be a better chance for you, for the South is in much better financial condition, and its people are fast learning to appreciate the value of labor-saving machinery, and to know that the best of anything to use or to wear is—in the long run—the cheapest. If, therefore, you make anything that economizes labor or household expenses, or that contributes to human comfort or adornment that you have not a sufficient demand for carry it to Augusta and show it to the people who will go there by thousands daily (Sundays excepted) from November 8th to December 15th, inclusive. You may be looking for a winter home, if so, you will meet multitudes from all over the South who can give you valuable information. Whoever you may be that read this, it will pay you to get to Augusta and see the exposition and city itself, and then to journey as your fancy or your business interests may suggest, to the many localities in the South where fine climate, numerous natural resources and lovely scenery will surround you. Railroad fares will be low at that time for tourists, while the country will be beautiful, the sky clear and the weather at its best. Do not fear yellow fever. Jack frost has already begun his fine work, and long before the 1st of November there will be no danger north of Florida, and probably none in that at present afflicted State. Augusta itself will be fresh, clean and beautiful after its great involuntary bath, and her enterprising people will rejoice in your coming to their renovated city and their great exposition. Go then to Augusta.

THE Supreme Court of Pennsylvania has decided against Jacob Reese in his fight with the Bessemer Association as to the ownership of his basic steel patents. The decree of the court requires him to turn his patents over to the Bessemer people.

Grading Coke Iron to a General Standard.

The system of grading pursued by Southern coke furnaces in the past having been peculiar to the district and out of line with the grading followed by Northern furnaces, it has been determined to so change the nomenclature of Southern grading as to make it conform to the standard common throughout the country.

Therefore, on and after October 1, 1888, the following schedule will be uniformly pursued by the companies whose signatures are attached:

- No. 1 foundry, same as hitherto called No. 2.
- No. 2 foundry, same as hitherto called No. 2½.
- No. 3 foundry, same as hitherto called No. 1 mill.
- No. 1 soft, same as hitherto called open bright.
- No. 2 soft, same as hitherto called close bright.
- Silver grey, same as hitherto called silver grey.
- Grey forge, same as hitherto called No. 2 mill.

Mottled, same as hitherto called mottled. White, same as hitherto called white. Sales agents are required to invoice, in accordance with this schedule, all shipments on new orders, and also those on orders taken before this goes into effect and not yet completed.

- Tennessee Coal, Iron & Railroad Co., operating the four Ensley furnaces.
- Tennessee Coal, Iron & Railroad Co., operating the two Alice furnaces.
- Tennessee Coal, Iron & Railroad Co., operating the three South Pittsburg furnaces.
- Tennessee Coal, Iron & Railroad Co., operating one Sewanee furnace.
- Sloss Iron & Steel Co., operating four Sloss furnaces.
- Nashville Iron, Steel & Charcoal Co., operating two Nashville furnaces.
- Williamson Iron Co., operating one Williamson furnace.
- Mary Pratt Furnace Co., operating one Mary Pratt furnace.
- Roane Iron Co., operating two Rockwood furnaces.
- Citico Furnace Co., operating one Citico furnace.
- Dayton Coal & Iron Co., Limited, operating two Dayton furnaces.
- Gadsden-Alabama Furnace Co., operating one Etowah furnace.
- Walker Iron & Coal Co., operating one Rising Fawn furnace.
- Chattanooga Iron Co., operating one Chattanooga furnace.
- Sheffield & Birmingham Coal, Iron & Railway Co., operating three Cole furnaces.
- Eureka Co., operating two Eureka furnaces.
- Woodward Iron Co., operating two Woodward furnaces.
- De Bardeleben Coal & Iron Co., operating two De Bardeleben furnaces.

Business Opportunities.

In our advertising columns to-day there will be found special advertisements of interest to many readers.

The Hagerstown Manufacturing Co., Hagerstown, Md., want to purchase a 50 horse-power boiler and engine in good condition.

The Nashville Land & Lumber Co., Nashville, Tenn., offer a valuable manufacturing property for sale, situated on the suburb of the city. The property to be disposed of consists of a large lot, planing mill building, storage sheds, stable, office, &c.

L. Cooper Overman, Major of Engineers, Cleveland, O., wants separate sealed proposals in duplicate for repairs at the harbors of Monroe, Mich., Huron and Port Clinton, O. See advertisement for further particulars.

The Loomis Fuel Gas Plant at Tacony.

The Loomis Gas Machinery Co. has nearly completed the plant built by it under the patents of Burdett Loomis, of Hartford, Conn., at Tacony, Pa., in connection with the saw and file works of Henry Disston & Sons, at that place, a suburb of Philadelphia. While this particular plant is housed in a corrugated iron building, 40x98 feet, a works of the same capacity would only require a structure 22x60 feet. Among the numerous systems designed to meet the growing demand for gaseous fuel for domestic and factory use, that of Mr. Loomis has occupied a prominent place. For three years a Loomis plant for manufacturing illuminating gas has been in operation at Cottage City, Mass., while the first fuel gas plant has been running regularly for over a year at the works of the John Russell Cutlery Co., at Turner's Falls. The works at Tacony have been in partial operation for some time past, while a large fuel plant is being built in connection with the Addyston Pipe & Foundry Co., at Addyston, Ohio, near Cincinnati. A contract has been closed lately for a large plant for manufacturing gas for factory and city use for Akron, Ohio, an illuminating works for Kenosha, Wis., and a fuel plant for the Waltham Watch Co., at Waltham, Mass., to furnish gas for all its boilers, forging, crucibles, annealing furnaces, soldering, tempering, etc.

The leading point in which the Loomis system differs from other methods of manufacturing water gas is that the generator is run by down draft during the period when the coal is being brought to incandescence to decompose the steam passed through it in an opposite direction to manufacture water gas. The process, therefore, consists of two distinct periods, producing two products—(1), generator gas made during the period of blasting, when air is drawn through a column of fuel downward by an exhaustor; (2), water gas, produced by allowing steam to enter from below into the column of incandescent fuel, being carried off by a series of tuyeres in the generator above the fuel line. The advantages claimed for the down draft system are that when the coal is being made hot during the blasting period, preliminary to the manufacture of water gas proper, the volatile gases passing down through the hot coal are fixed. In other words, the troublesome tars, etc., are decomposed. The down draft system, it is claimed, tends also to reduce clinking, there is no poking from the top, and the coal is charged during the blasting wherever spots of fire begin to show.

The Tacony plant consists of four generators, having a 9-foot outside diameter, 6-foot diameter fire-box and 14 feet height, with a fire-brick grate and an air tight charging hopper. Connected with the ash pit is a vertical cooler, 2 feet in diameter and 18 feet high, the generator gas being drawn through its thirty tubes by a No. 3 Root's exhaustor, the office of the cooler being to reduce the temperature of the generator gas made during the blasting period to 500 to 600 degrees. In this manner the injurious effects upon the exhaustor of sudden and great fluctuations in temperature are avoided. The water in the cooler is used to feed the boilers, so that the heat is not wasted. The rest of the plant consists of a Heine boiler, set to be run with generator gas, which furnishes steam for two 9x13 engines, made by the Phoenix Iron Works, to drive the four exhaustors, one engine being used for the day turn, and the other for the night shift.

There was being built, too, at the time of our visit, a set of retorts of special design for manufacturing illuminating gas with the water gas as a basis, the foundations for the purifier being completed while the last touches were being put to

two holders, one of 30,000 feet capacity for water gas, and one of 30,000 feet capacity to be used for illuminating gas. Now it is being employed to measure the quantity of generator gas consumed and made. We may mention that the company have laid over a mile of pipe in the village of Tacony, and that a number of houses have their connections completed for fuel gas. The company have fitted up a room with stoves, lamps, etc., to show the domestic applications of the gas.

Turning now to the results obtained, it is stated that the relative proportions of generator and water gas show a production of 130,000 to 140,000 feet of the former and from 40,000 to 50,000 feet of the latter, according to the character of the coal used. Any kind of bituminous or semi-bituminous slack coal may be employed. So far as the employment of anthracite culm is concerned, we are advised that since the Tacony plant was built specially for bituminous coal it has not been determined how far it is possible to go with it as a part of the mixture.

Thus far the maximum has been two-thirds of anthracite culm and one third of bituminous coal. The 6-foot generators at Tacony each have a capacity for gasifying eight tons of coal per twenty-four hours, and it is estimated that the size now contemplated for subsequent plants, 7 feet diameter of fire-box, will convert ten tons daily into gas. When running on generator gas alone, as large an amount of steam is introduced into the generator as is consistent with a continuous run, so that the product is a gas which practically is intermediate between the ordinary Siemens producer gas and pure water gas. The Tacony plant, which was built under the supervision of Mr. S. T. Williams, general manager of the steel works of Messrs. Dison & Sons, has been used for some time past to test the value of fuel gas in its application to the different departments of these works.

At the time of our visit the striking differences in the convenience of using solid and gaseous fuel were well illustrated in the forge and hardening shops of the works. In the file forging shop a number of the gas and coal forges were at work, though the latter are being taken out as rapidly as possible. The contrast in cleanliness, ease of supervision, comfort to the men and uniformity of heating was remarkable, and even though the comparative cost has not yet been ascertained, these incidental important advantages would insure the employment of gas even if there were a balance against it. In the saw hardening department one furnace has been remodeled to use gas, and others are following. There, too, the same features are striking, being coupled besides with a decided gain in the amount of work one man can do and with the advantage that the entire handling of coal and of ashes is dispensed with, and that it becomes possible to economize considerably in floor space. For some time past, Loomis generator gas has been used in a Siemens re-heating furnace, with a 7x12 feet hearth, used in connection with an 18-inch bar mill. According to the Superintendent, its superiority over ordinary Siemens producer gas has been well shown in the smaller consumption of gas and in the more rapid and better working of the furnace. Permanent connections are now being made with the main mill, and within a week fuel gas will be used exclusively. Gas flues are being laid to connect with all boilers in the steel works, and in a few weeks they, too, will be fired with generator gas. Thus far only the generator gas has been employed in the heating furnace. Later on a practical demonstration is to be made with the use of pure water gas in a Siemens furnace. It is claimed that the saving of labor in running these Loomis generators on generator gas over the Siemens producers is very large, one man doing the work of three; and the gas is made under pressure and can be carried to any number of furnaces, direct without use of stack draft and the flow regulated perfectly.—Iron Age.

56,000-Pound Iron Ore Car.

The Railroad Gazette in a recent issue gives illustrations of an iron car especially designed for carrying iron ore. The car at first sight appears to be small for the marked capacity, but as the iron ore contains 70 per cent. of metallic iron, the specific gravity is very high, and, therefore, a considerable load can be carried in a small space.

In design the car differs in nearly every essential point from an American car. It is made wholly of iron, and is carried on six wheels with a 9-foot rigid wheel base, and each wheel has an independent semi-elliptic spring.

The cars were designed by Messrs. Wilkin & Jarvis, of Westminster, and built by the Birmingham Railway Carriage & Wagon Co. for the Swedish and Norwegian Railway, a line connecting Lulea, on the Baltic, with Ofoten, on the North Sea, and traversing an iron ore region in the Gellivara Mountains.

The usual train consists of 40 of these cars, conveying 1,000 gross tons of ore and hauled by an 8-wheel connected engine. All the cars are fitted with the Westinghouse brake and with a screw hand-brake of substantial design. The wheels and axles are of iron made from Gellivara ore. An ordinary sized axle made of this iron recently stood the following test:

Axle reversed between each blow; centers of bearing under test, 3 feet 6 inches; 28 blows from a tup, weighing 2,340 pounds, falling 16 feet; 4 blows, do. do., 20 feet; 2 blows, do. do., 24 feet; 3 blows, do. do., 28 feet, before breaking. This axle has been forwarded to the Glasgow Exhibition.

The axles for the car illustrated are, of course, considerably larger and measure no less than 5½ inches diameter at the center. As the car weighs about 22,000 pounds, the total load, 78,000 pounds, is divided between three axles, giving a total weight of 26,000 pounds for each axle. Taking the weight of a 60,000-pound car at 36,000 pounds, the total weight per axle of a modern American car is 24,000 pounds. The difference in the weight per axle is thus inconsiderable, and though the distance between centers of bearings is longer in the English wagon than in the M. C. B. standard, a difference of three inches is not sufficient to account for the enlarged diameter of the axle of the car under notice. If the latter axle is correctly proportioned, the axle for a 60,000 pound car, allowing for the difference in load and distance between centers, should be 4 15-16 inches diameter in the center.

The area of the journal obtained by multiplying the length and diameter (9 in. x 4½ in.) together is 405 square inches, and, dividing this into the total weight per journal, gives 321 pounds per square inch. The M. C. B. axle with a 40,000-pound capacity car weighing 20,000 pounds gives 284 pounds per square inch, and with a 50,000 pound car weighing 25,000 pounds, the weight is 357 pounds per square inch.

The strength of the axle of the car illustrated is therefore somewhat in excess of the proposed axle for 60,000-pound cars, and the bearing surface of the journal is very similar in both cases. The journal of the proposed axle for 60,000 pounds measures 7½ inches by 4½ inches, and the weight per square inch is 373 pounds, or 16 per cent. in excess of the Swedish and Norwegian axle, and 81 per cent. in excess of the M. C. B. under a light 40,000-pound car.

The car is fitted with side buffers and with the screw coupling generally used in Europe. The use of a right and left-handed screw, threaded through the pins in the shackles, enables the cars to be drawn closely together, elongating the draw-springs and correspondingly com-

pressing the buffer springs; loose slack can thus be avoided.

The dimensions of the principal parts are given below:

Outside sills (a), channel.....	10x 4x½
Intermediate sills (a), channel.....	10x 3½x½
End sills (a), channel.....	10x 4x½
Sides and ends, body, plate.....	¾
Gussets, body, plate.....	¾
Doors and bottom, plate.....	¾
Length over outside sills.....	14 ft. 6 in.
Width over outside sills.....	6 ft. 9½ in.
Wheel base.....	9 ft. 0 in.
Wheels, diameter on tread.....	36 in.
Axle journals.....	9 in. x 4½ in.
Axle, diameter in center.....	5½ in.
Axle, centers of journals.....	6 ft. 8 in.

New York Iron Market.

Specially reported by WARREN, WOOD & Co., Pig Iron, 115 Broadway.

NEW YORK, Oct. 2 1888.

Pig Iron.—The demand continues good and prices are firm at our last quotations. With the exception of Bessemer steel rail mills, nearly all the consumers are running full time. Many of the customers who are at points where navigation is closed during the winter will soon have to lay in their winter stock.

Flour Mill.

ATHENS, TENN., Sept. 25, 1888.

Editor Manufacturers' Record:

A portion of the stock for the \$50,000 steam flouring mill has been subscribed. The mill will be built this fall or next spring. ATHENS MINING & MFG. CO.

Many Saw Mills.

WARREN, ARK., Sept. 24, 1888.

Editor Manufacturers' Record:

Saw mills are being put up all over the county to saw up the pine timber for consumption. Gins at every cross-road.

JNO. H. PAGE.

Electric Plant.

MATSVILLE, KY., Sept. 24, 1888.

Editor Manufacturers' Record:

We have in contemplation the erection of an electric plant, to run be in connection with our works, but have not yet decided the matter. MATSVILLE GAS CO.

To Start Cotton Factory.

LIBERTY, N. C., October 2, 1888.

Editor Manufacturers' Record:

A stock company has been formed here to build a cotton factory. We propose to build a house 44x30 feet, boiler and engine room 20x30 feet, picker room 30x40 feet, all to be one story. We want to commence with 1,000 spindles and manufacture coarse yarns. Will want to buy some good second-hand machinery. BURGESS BROS.

Saw Mill and Wood-working Factory.

ATLANTA, GA., Oct. 1, 1888.

Editor Manufacturers' Record:

Mr. T. F. Cowan, Cedartown, Ga., has purchased one 50 horse-power engine, 50 horse-power boiler, heavy saw mill, wood-working machinery, &c., and will locate same at Renfro, Ala. Will begin work soon as above can be set up. W. J. DUNN.

To Build Rod and Wire Mills.

COVINGTON, KY., Oct. 1, 1888.

Editor Manufacturers' Record:

We will increase our present plant by the erection of a Garrett rod mill of 100 tons capacity and wire mill of 75 tons capacity, double turn. We expect to be in operation February 1.

THE AMERICAN WIRE NAIL CO.

If you are not already a subscriber to the MANUFACTURERS' RECORD send us \$4 and you will receive it regularly for one year or six months for \$2.00.

THE Pioneer Mining & Manufacturing Co., Birmingham, which is the Alabama branch of the Thomas Iron Co., of Pennsylvania, will open new coal and ore mines, in addition to building another large furnace and a rolling mill, as mentioned last week. Work on the furnace and mill, it is said, will not be commenced until after the presidential election.

REFERRING to the prospects for the continued and rapid growth of Roanoke, Va., The Times, of that city, says that the new rolling mill is rapidly nearing completion, the car shop at the great car works is to be doubled in size, while arrangements are being made in the boiler and machine department for the building of one locomotive a day, a site has been donated to Philadelphia capitalists who will erect large iron and steel bridge works, the new canning factory has proved a great success and the building operations for the year will show nearly a thousand new houses, while all other indications are likewise favorable for a great advance. This is certainly a healthy showing, and indicates a bright future for this prosperous city, sometimes known as Virginia's Young Giant.

PROPOSALS.

PROPOSALS FOR REPAIRS, &c. U. S. Engineer Office, 55 Euclid Avenue, Cleveland, O. Sept. 30, 1888. Separate sealed proposals in duplicate will be received at this office until 5 o'clock P. M. Monday, October 6, 1888, at which time they will be opened in presence of bidders, for repairs at the following harbors: At Monroe, Michigan; at Huron, Ohio; at Port Clinton, Ohio. Proposals will be accompanied by a written guarantee that in case the bid be accepted, contract will be entered into with good and sufficient security within ten (10) days after notice of such acceptance. Forms, specifications and other information can be obtained at this office. The United States reserves the right to reject any and all proposals. L. COOPER OVERMAN, Major of Engineers.

Bids Wanted on Water Works.

Wanted bids on a system of Water Works, to be built at Richmond, Madison Co., Kentucky. Address F. H. ADAIR, Secretary, and copies of drawings and specifications will be forwarded. Bids will be opened in presence of bidders on Saturday, October 13th, 1888.

Wanted to Purchase! A Fifty Horse-Power Engine And Return Tubular Boiler

IN GOOD CONDITION. Address Hagerstown Manfg. Co., Hagerstown, Md.

WANTED.

A PARTNER to engage in machine shop in a live, growing town in North Alabama, with mill and river facilities. No machine shop nearer than 100 miles. A practical machinist or blacksmith, or No. 1 business man with \$5,000 can find a good opening with a first-class machinist and draughtsman, who has a few thousand dollars invested in Land, Buildings and Steam Plant, located in North Alabama. Address C. L. E., Care Manufacturers' Record.

COAL and IRON

Properties located in the best fields of Alabama and Tennessee FOR SALE. Finest timber tracts in the South and West. Data furnished. Ask for what you need. CLARKE & BIBB, BARKERS AND BROKERS, 18 Broadway, New York.

LAUNDRY FOR SALE.

Steam Laundry. Complete outfit, consisting of 15 H. P. engine, 30 H. P. boiler (steel), drying house, and all washing machinery, (15 machines), now and ready to run. Will sell land, buildings and dwelling house, or laundry machinery, less steam plant. Located in a growing city of 4,000 inhabitants, and increasing. Object—I am a machinist and know nothing of laundry business. Outfit located in North Alabama. Address C. L. E., Care Manufacturers' Record.

West Virginia's Coal Interests.

According to a report made by Prof. M. F. Maury, of the United States Geological Survey, West Virginia has 10,000 square miles of splendid coal territory which comprises about two-thirds of its total area; in other words, it has 10,240,000 acres of coal, which some day not far distant will be of inestimable value. This is the largest coal area of any State in the Union. It comprises several varieties, such as splint, cannel, gas, coking coal, &c., all of which meet ready demand and good prices. Its quality is common with that of Pennsylvania, which is superior to the Western coal, and finds readier sale.

Most of this area is still undeveloped, owing to the lack of transportation and to the extensive development in Pennsylvania, which has largely supplied the markets of the country. But now transportation facilities are rapidly being developed, and the deep mining in Pennsylvania must eventually be superseded by the cheaper mining in West Virginia, so that the coal of our State will find a ready and remunerative market.

Now let us see what this wealth of coal means to the farmer who owns the lands, in the matter of royalty. Major Shutt, of the U. S. Geological Survey, estimates that over this area the workable veins reach 6 feet; 43,560 superficial feet constitute an acre. A cubic foot of coal is a bushel, hence six times the superficial feet (6x43,560) would represent the number of bushels of coal to the acre, which would be 261,360 bushels. The royalty on coal, in accessible regions, is one cent per bushel; but West Virginia hills and mountains are not accessible spots of earth for transportation purposes, unless they are well girdled with narrow-gauge railroads, so we will estimate the royalty at one-eighth of the usual royalty, or 1 1/4 mills per bushel; an acre of coal will yield to the owner of the land \$36.50. We will now assume that all of this area does not comprise workable veins, say that two-thirds of it does, which is under, rather than an over estimate; that will give us 12,000 square miles or 7,680,000 acres of workable veins of coal, which at one-eighth of a cent per bushel for royalty, will yield to the owners of these lands the royal sum of \$2,507,520,000, and they will yield this amount and more before they are exhausted. When we come to estimate the value of this mine of wealth to those who mine it, those who market it, and to the manufacturers of the country and the army of workers engaged in them, the result is incalculable, and effects all commerce and every branch of trade. This vast wealth belongs to the citizens of America and to West Virginians, and they will gather the profit from it, provided the markets of America are preserved for the benefit of the citizens of America. Is it not a matter of some importance to the citizens of this State that this vast interest shall not be subjected to adverse legislation, and made to compete with the underpaid labor of foreign countries?—Ohio Valley Manufacturer.

C. R. MAKEPEACE & CO.
ARCHITECTS AND MILL ENGINEERS

PROVIDENCE, R. I. Plans, Specifications and Estimates furnished for Cotton and Woolen Mills.

LOCKWOOD, GREENE & CO.

MILL
ENGINEERS,

NEWBURYPORT, MASS.

PLANS AND SPECIFICATIONS FURNISHED FOR THE CONSTRUCTION, EQUIPMENT AND ORGANIZATION OF COTTON AND WOOLEN MILLS.

3 New Marine Steel Boilers,

ONE HUNDRED AND FIFTY HORSE-POWER EACH; CAN BE USED TOGETHER IN ONE BATTERY OR SEPARATELY; NOW STORED AT APALACHICOLA, FLA. For terms, address

The FILER & STOWELL COMPANY,
MILWAUKEE, WIS.



ENTIRELY NEW. HOME-LIKE. ELEGANT.
HIGHEST ELEVATION ON HANDSOMEST STREET.
American Plan, \$3.00 to \$4.50 per day.
Telegraph for Rooms at our expense.
C. WARNER STORK, Proprietor.

A New Georgia Enterprise.
Leak's Collecting and
Protective Agency of Georgia,

HEADQUARTERS, GRIFFIN, GA.

Offers to resident and non-resident creditors a safe and prompt method of collecting debts. Offers to furnish creditors, on application, the present standing of any firm in the state. This agency represents creditors throughout the state to look after their outstanding accounts, to protect them in giving credit, and to notify them when any of their customers begin to get in bad shape. Its chief field of operations is directed to Commercial Channels, and will confine its workings solely to this state.

This Agency will furnish an estimate of the Financial Standing and Reliability of any business firm doing business in this state, to commercial travelers or salesmen representing firms who are our patrons. Being familiar with the leading attorneys in Georgia, we have selected none except the leading and most reliable attorneys in the different cities and towns, and we can assure our patrons that claims sent to us will be immediately placed in the hands of attorneys able and reliable in every particular.

We shall publish a book annually containing general information, and the same will be furnished to our patrons.

Send your claims to S. G. LEAK, and correspond only with him at headquarters, Griffin, Ga. Address

S. G. LEAK, Manager,
GRIFFIN, GA.

BANKERS AND BROKERS.

WILSON, COLSTON & CO.
Bankers & Brokers,

[Members of Baltimore Stock Exchange.]

216 E. Baltimore Street, Baltimore, Md.

Investment and Miscellaneous Securities a specialty, and large lines handled. Exceptional facilities for dealings in all classes of Southern Bonds. Loans on Collateral Securities negotiated. Quotations and Information furnished on application, and correspondence invited.

UNION LOAN AND TRUST COMPANY,

BOSTON, MASS.

Incorporated 1885.

Capital Stock \$1,000,000.

Authorized by charter to receive, hold and disburse money, securities or property in trust, and act as financial agent for any person, firm or corporation, National, State or Municipal authority.

Special Attention will be given to the Negotiating of Southern Bonds and Mortgages.

This Company has superior facilities for making collections throughout the entire country, having correspondents and agents established at all points. Correspondence invited.

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At a Bargain.
—A No. 4—

Hoyt Bros. Double Surfacers.

Address J. MICHEL,
61 Fort St. East, Detroit, Mich.

Mineral & Timber Land Co.

OF THE SOUTH.

Capital - \$100,000.

Ex Gov. John C. Brown President
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J. H. Moore Vice President
T. F. P. Allison Vice President
Lewis T. Baxter Secretary and Treasurer

Mineral and Timber Lands in the
Southern States Bought and
Sold on Commission.

Agencies in New York, Chicago, Boston
and London.

We call the attention of owners of large
tracts of land to the unusual advantages
offered by this Company. Address

LEWIS T. BAXTER,
Secretary and Treasurer,
Nashville, Tenn.

References: The bankers and business men
of Nashville, Tenn.

MEMPHIS
Land & Timber Co.

No. 10 Madison Street,
MEMPHIS, TENN.

OFFERS FOR SALE

250,000

ACRES OF

Timber & Agricultural
LANDS

In the Counties of Clay, Greene, Craig-
head, Poinsett, Mississippi, Cross, St.
Francis, Crittenden, Woodruff and Mon-
roe, in the State of

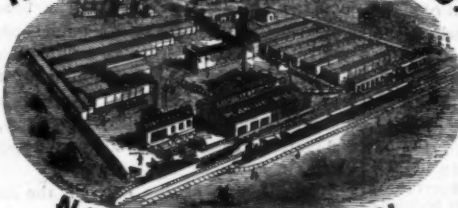
ARKANSAS,

in bodies to suit purchasers. Prices very
reasonable. Correspondence invited.

If you wish to keep posted on the prog-
ress of the South, read the MANUFACTURERS'
RECORD. Price \$4.00 a year.

FOR SALE!

NASHVILLE LUMBER CO.



NASHVILLE, TENN.

Nashville Lumber Co., Nashville, Tenn.

FOR SALE.

1 3/4-in. 1 Beater Breaker Lapper. } English.
1 3/4-in. 1 Beater Finisher Evener. }
1 3/4-in. 3 Beater Kitten, with preparator.
1 3/4-in. 3 Beater, Whiting's.
1 3/4-in. 3 Beater, Whiting's.
1 3/4-in. 3 Beater, Whiting's.
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1 3/4-in. 3 Beater, Whiting's.
1 3/4-in. 3 Beater, Whiting's.
1 3/4-in. 3 Beater, Whiting's.

50 10-6, 10-5, 9-4 1/2 Stubber's, different makes.
55 7 1-3/4, 6-3 Speeders.
100 Spinning Frames, 1 1/2 in., 1 3/4 in., 2 in., 2 1/2 in., 3 in., 3 1/2 in., 4 in., 4 1/2 in., 5 in., 5 1/2 in., 6 in., 6 1/2 in., 7 in., 7 1/2 in., 8 in., 8 1/2 in., 9 in., 9 1/2 in., 10 in., 10 1/2 in., 11 in., 11 1/2 in., 12 in., 12 1/2 in., 13 in., 13 1/2 in., 14 in., 14 1/2 in., 15 in., 15 1/2 in., 16 in., 16 1/2 in., 17 in., 17 1/2 in., 18 in., 18 1/2 in., 19 in., 19 1/2 in., 20 in., 20 1/2 in., 21 in., 21 1/2 in., 22 in., 22 1/2 in., 23 in., 23 1/2 in., 24 in., 24 1/2 in., 25 in., 25 1/2 in., 26 in., 26 1/2 in., 27 in., 27 1/2 in., 28 in., 28 1/2 in., 29 in., 29 1/2 in., 30 in., 30 1/2 in., 31 in., 31 1/2 in., 32 in., 32 1/2 in., 33 in., 33 1/2 in., 34 in., 34 1/2 in., 35 in., 35 1/2 in., 36 in., 36 1/2 in., 37 in., 37 1/2 in., 38 in., 38 1/2 in., 39 in., 39 1/2 in., 40 in., 40 1/2 in., 41 in., 41 1/2 in., 42 in., 42 1/2 in., 43 in., 43 1/2 in., 44 in., 44 1/2 in., 45 in., 45 1/2 in., 46 in., 46 1/2 in., 47 in., 47 1/2 in., 48 in., 48 1/2 in., 49 in., 49 1/2 in., 50 in., 50 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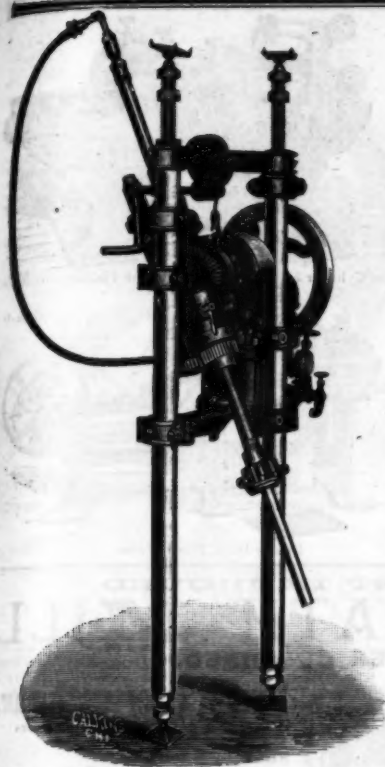
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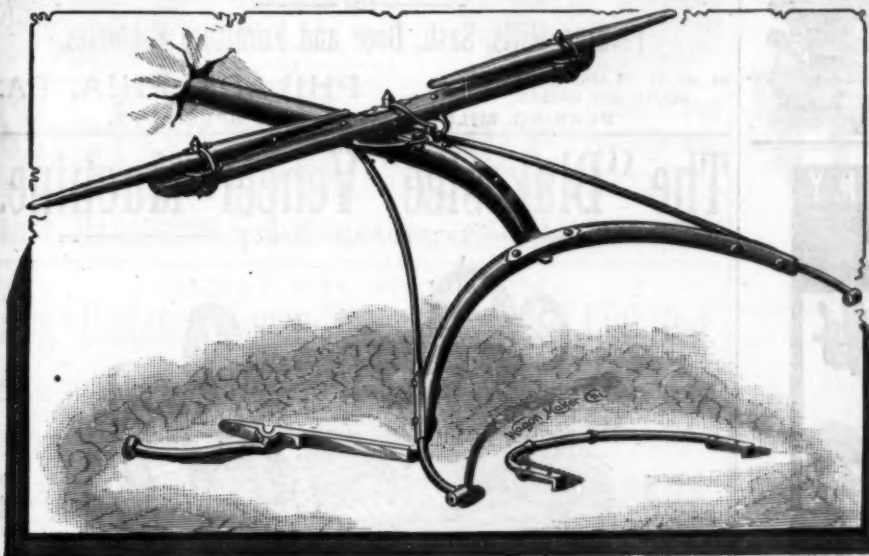
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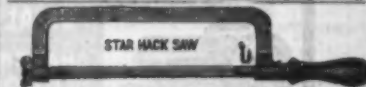
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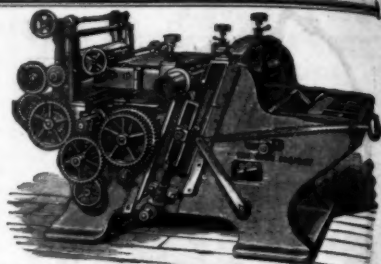
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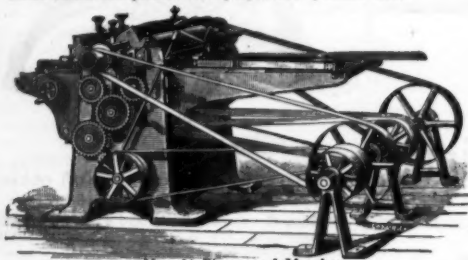
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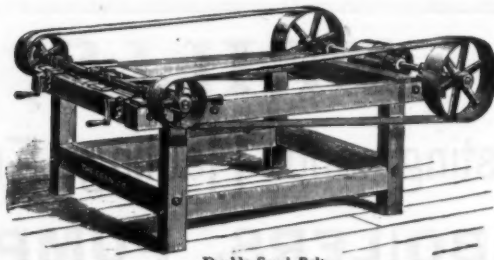
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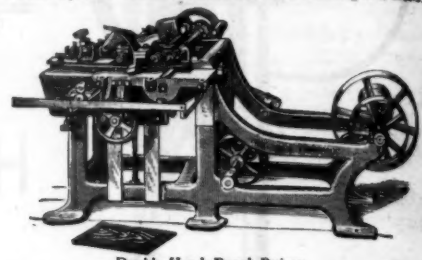
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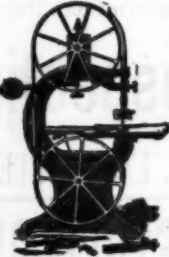
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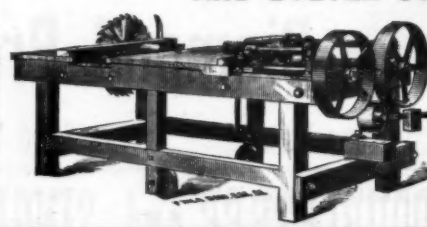
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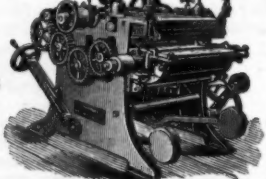
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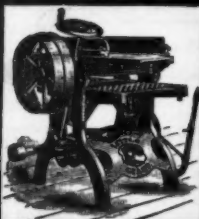
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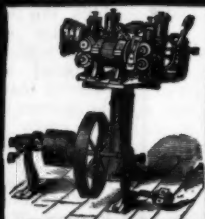
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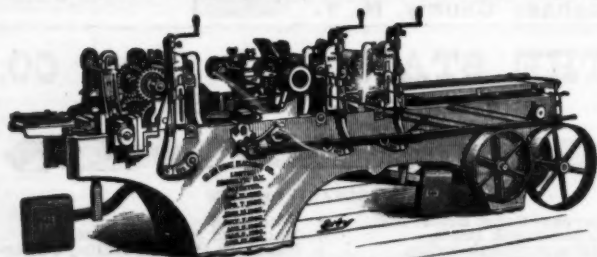


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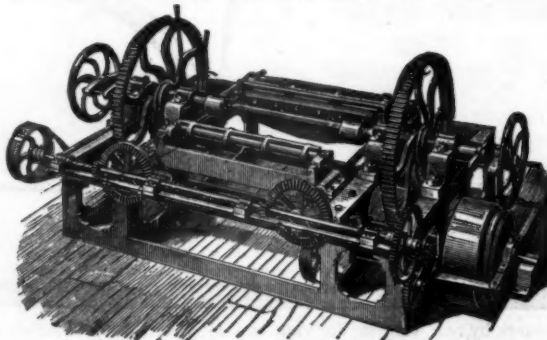
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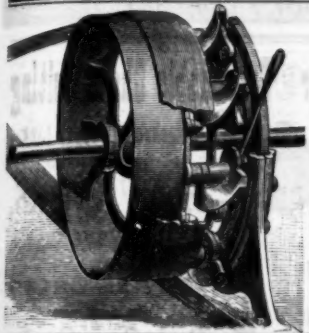
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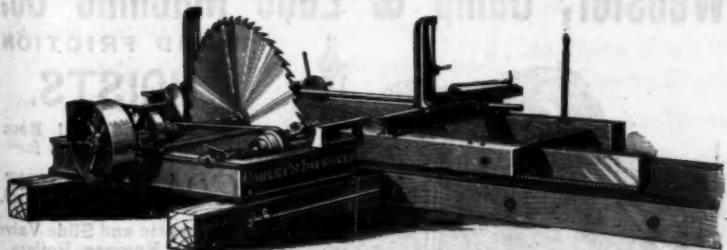
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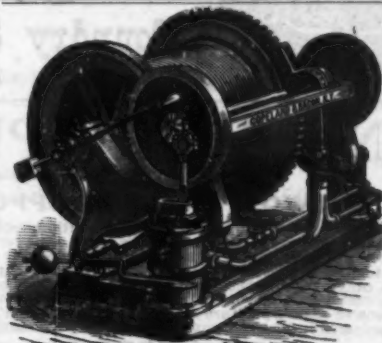
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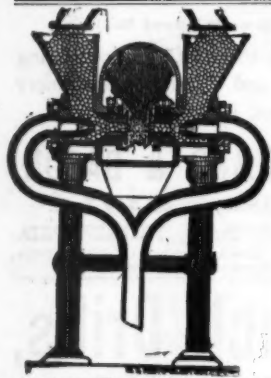


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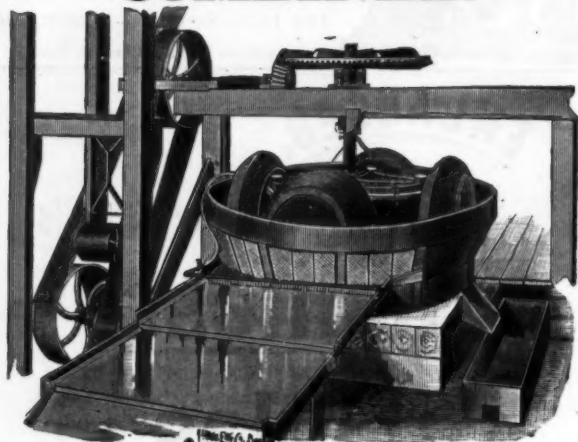
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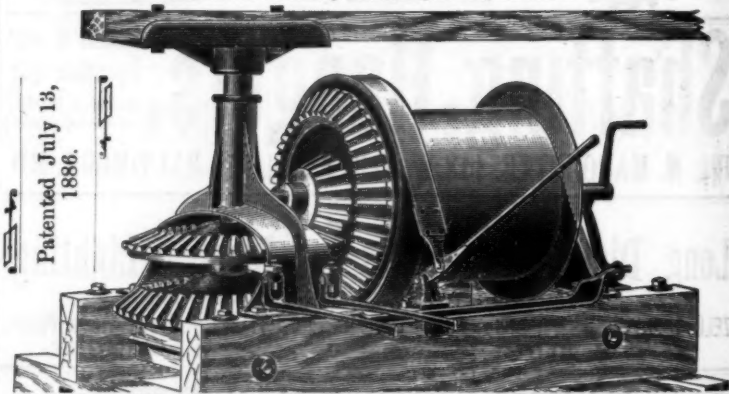
4 POSTOFFICE SQUARE,

A. A. REEVE, Treasurer.

BOSTON, MASS.

THE CONTRACTORS' PLANT MANFG. CO.

129 ERIE STREET, BUFFALO, N. Y., U. S. A.



AN IMPROVED HORSE POWER HOISTING MACHINE, with a combination of fast and slow speed. With fast speed a horse will lift 1,000 to 1,500 lbs. on a single line at a speed of 60 feet per minute, and with a single block 3,000 lbs. 40 feet per minute. With the slow speed a weight of 1 1/2 tons with a single line, and with a single block 3 tons; with two single blocks 5 tons; with double and single blocks 7 tons. The speed single line 30 feet per minute, with single block 15 feet per minute.

In this combination of gears the user has the advantage of two machines embraced in one, with a saving of 25 per cent. in cost and 60 per cent. in weight.

SIMPLE, DOES NOT GET OUT OF ORDER.

WRITE FOR ILLUSTRATED CATALOGUE OF

HORSE POWER HOISTING MACHINERY

For Bridge Builders, Contractors, Quarrymen, Mineral and Coal Miners, Masons and Builders.

DERRICKS AND CONTRACTORS' SUPPLIES. Mention this paper when you write.

Webster, Camp & Lane Machine Co.

BAND FRICTION

HOISTS.

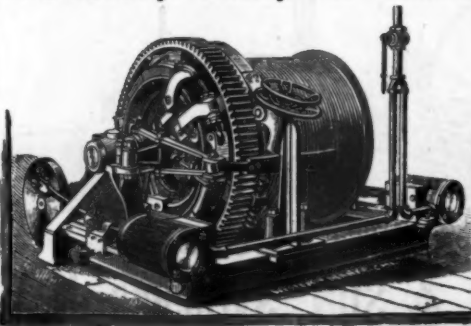
Endless and Tail Rope

Haulage Engines for

COAL MINES.

Automatic and Slide Valve
Steam Engines, Boilers,
Pumping Plants, Cages,
Ore Cars, Sheaves, etc.

AKRON, O.



ROANOKE CITY, VA.

POPULATION 1881, 400.

POPULATION 1888, 12,000.

Roanoke City is located in the mountains of Virginia, 1,000 feet above sea level—between the Blue Ridge range on the east and Alleghany range on the west.

It has an elegant Courthouse, Market-House, Opera House, Public School Houses, Firemen's Hall and many other public buildings.

Has a Gas Company with a capital of \$120,000.

Has an Electric Light System, both arc and incandescent—in course of construction.

Has a system of Water Works, the finest in the State, worth \$250,000.

Has 12 churches, representing nearly every denomination.

Has four banks, operating on an aggregated capital of \$450,000.

Is the headquarters of the Norfolk & Western Railroad Company, which employs 300 clerks.

Is the headquarters of the Shenandoah Valley Railroad, which employs 75 clerks.

Is the headquarters of the Pocahontas Coal Company, the largest coal operators in the world.

Is the headquarters of the Virginia Steel Company, which is backed by \$5,000,000 in cash.

Is the headquarters of the Virginia Company, operating on a large capital.

Is the headquarters of the Washington & Western Railroad Company.

Is the headquarters of the Virginia Mineral Railroad Company.

Is the headquarters of the Roanoke & Southern Railroad Company—now under construction.

Has a large wholesale and retail trade, embracing sixteen of the most productive counties in the Old Dominion, and its wholesale trade extends into West Virginia, Tennessee and North Carolina.

Has the most delightful and healthiest climate in the world.

Has, within fifty miles of it, a dozen of the most famous watering places in America.

Has The Crozer Steel & Iron Company, operating on a capital of \$500,000, employing 300 men, and turning out 120 tons of pig iron per day.

Has the Roanoke Machine Works, with a capital of \$1,000,000, and employing 1,000 men.

Has the Roanoke Rolling Mill, with a capital of \$150,000—in course of erection.

Has a Roller Flouring Mill, valued at \$15,000.

Has the Diamond Ice & Refrigerator Company, capital \$25,000.

Four Planing Mills, with a capital of \$25,000.

The railroads and various manufacturing enterprises of Roanoke have monthly pay rolls aggregating \$150,000, all of which is paid to citizens of Roanoke.

Has four hotels capable of accommodating 500 guests; Hotel Roanoke cost \$80,000.

375 houses were erected in Roanoke City during 1887, and at least 800 will be erected during 1888. There are at present 200 buildings under construction.

The bonded debt of Roanoke City is smaller than that of any city in the South of equal size, being less than \$150,000. The city tax rate is \$1.10 on the hundred dollars—lighter than that of any city in the South.

Roanoke City will spend, during 1888, \$16,000 for public school buildings; \$25,000 for sewerage; \$25,000 for streets, and about \$15,000 for miscellaneous public improvements.

An Opera House Company has been chartered and will erect a \$50,000 theatre building.

The Roanoke Street Railway & Transportation Company has been chartered and will construct three miles of street railway.

The Home Building & Conveyance Company has been chartered and are now building and preparing plans for 100 residences.

Has the Roanoke City Mills, capital \$20,000.

Trade of Roanoke has increased 300 per cent. during the past three years.

1,000 miles of railroad now in operation, focus at Roanoke.

Roanoke is 258 miles west of Norfolk, and 150 miles east of Bristol, on the Tennessee line.

The only city of any consequence within 200 miles of Roanoke is the city of Lynchburg, by the James.

Roanoke is the supply depot for a territory embracing 16 counties in Virginia and many of the border counties of West Virginia, Tennessee and North Carolina.

Roanoke is the headquarters of nearly all the mining companies now operating in the Southwest.

Has the largest fruit and vegetable canning factory in the South, with a capacity of 15,000 cans per day.

Has the Roanoke Land & Improvement Company, operating on \$600,000 capital.

Has four Building and Loan Associations, capital \$350,000.

Has the Roanoke River passing along its borders, furnishing unsurpassed water power for manufacturing purposes.

Has more undeveloped mineral wealth within easy reach than any city in the South.

Roanoke will soon be the terminus of two divisions of the Norfolk & Western Railway system, thus adding 1,500 to its population.

Roanoke is building a Masonic Temple to cost \$25,000, and a Y. M. C. A. building to cost \$20,000.

Real estate is from 100 to 200 per cent. cheaper in Roanoke than in any city of promise in the South.

Roanoke will have a population of 25,000 souls when the census of 1890 is taken.

We want men of money and men of muscle.

Has the West End Land Co., operating on a capital of \$40,000, paid up.

ATHENS, East Tennessee,

THE COMING

→ Iron and Manufacturing City of the South. ←

Athens is the county seat of one of the most fertile counties in East Tennessee. The health of the city is unsurpassed, and is **ABSOLUTELY FREE FROM ALL MALARIAL OR EPIDEMIC DISEASES**. The surrounding scenery is very fine. From the main avenue the whole valley of East Tennessee can be seen, from the Cumberland Mountains on the west to the Great Smoky Mountains on the east; some of the tallest peaks east of the Rockies being in full view. **FINE MINERAL SPRINGS** are adjacent and are popular summer resorts. The society of Athens is excellent. A cordial welcome is extended to all law-abiding people locating in the town. The **EDUCATIONAL FACILITIES** are good. Beside public and preparatory schools, Athens is the seat of **THE GRANT MEMORIAL UNIVERSITY**, which has an enrollment of over 300, and whose graduates include some of the most distinguished citizens in the country. Among the industries and institutions of the place in active operation are:

THE ATHENS BUILDING & LOAN ASSOCIATION, \$250,000. **THE ATHENS WOOLEN MILLS, \$100,000.**

THE FIRST NATIONAL BANK, \$50,000.—To be increased at once.

FOUNDRY & MACHINE SHOPS, \$25,000.

FURNITURE WORKS, \$15,000.

FLOURING MILLS, \$20,000, etc.

500 men are now at work on the new railroad from Athens to the

RICHEST IRON FIELDS IN THE SOUTH.

JUST EAST OF THE TOWN.

Only eight miles from Athens are **VEINS OF RED FOSSILIFEROUS ORE 11½ FEET THICK**, and 4 to 12 miles beyond are **THE LARGEST DEPOSITS OF BROWN ORES IN THE SOUTH**. The ores of both varieties, in addition to being inexhaustible, are both superior in quality to any ores of either variety at present mined in the South. An assertion that can be sustained. Coke can now be obtained at the lowest prices, and in addition a new railroad is now projected to the Cumberland Coal Fields, only 22 miles distant. These roads will give Athens **UNSURPASSED SHIPPING FACILITIES**. The road under construction will penetrate large deposits of Tennessee Variegated Marble; also an Unopened Timbered Region, and will develop the

Largest Colored Slate Deposits in the United States.

These quarries are now being opened, and are pronounced by experts Absolutely Inexhaustible, and equal in quality to the finest Vermont Colored Slate.

The ATHENS MINING & MANUFACTURING CO.

Have alone just contracted for the erection of over

\$500,000 IN NEW MANUFACTURING ENTERPRISES

At Athens, including a 100-ton Blast Furnace, cost \$200,000; Cotton Mills, cost \$150,000; Furniture Works, employing 200 men, cost \$100,000; Hotel, cost \$60,000; Water Works, Street Car Lines, &c. These improvements have been commenced which, added to other improvements projected, will add

\$1,000,000 OF NEW MANUFACTURING ENTERPRISES TO ATHENS.

The company desire to open correspondence with parties desiring to locate, and will extend liberal inducements in addition to gifts of sites in order to induce New Manufacturing Enterprises to locate in Athens. City property is doubling in value every few months, and at present low prices is beyond question a very fine investment.

The Athens Mining & Manufacturing Company,

R. L. BRIGHT, President

R. J. FISHER, Secy. and Genl. Manager.

ROME, GA.

OF all the growing cities in the growing South, Rome presents the greatest opening for money-making investments. With surrounding fields as rich as the lands of Goshen, with exhaustless deposits of brown and red Iron Ores and Manganese immediately at hand on all sides, with mountains of Marble and Limestone coming right up to the city, with an abundance of the best Coal easy of access, areas of untouched forests, and with seven railroad outlets and two navigable rivers, Rome stands, in natural advantages, pre-eminently above any other proud and pretentious city within the limits of this proud and ambitious commonwealth.

THE HEALTH OF ROME IS UNSURPASSED.

*THE UNUSUALLY LOW DEATH RATE IS A PHENOMENON,
STANDING WITHOUT A PEER AT 8.40 PER THOUSAND.*

*NOT ONE CASE OF CATARRH OR CONSUMPTION EXISTS OR
EVER ORIGINATED WITHIN HER LIMITS.*

Rome has 12,000 inhabitants, has invested in colleges and school buildings about \$300,000; in church building over \$100,000; in her new hotel \$125,000; in the dummy line, just completed, over \$50,000. Her manufactories employ 800 hands, with other enterprises now going up. Her system of water-works and sewerage is unsurpassed. The city is lighted with gas, and negotiations for an electric light plant are now pending. The highways leading to the city are all well macadamized. The Post-office Department has recently made Rome a free postal delivery office. The annual business of the city is about \$12,000,000, with the trade constantly increasing. The yearly range of temperature at Rome, between the average highest and lowest, is about 84 degrees; the mean temperature is 60.6 degrees. About seven months intervene between the first and the last killing frosts of the year. There is no better society to be found anywhere.

The Rome Land Company (J. W. Rounsaville, President, T. F. Howell, Treasurer, and J. L. Bass, Secretary and Business Manager) will donate ample grounds to, and otherwise aid, any worthy manufacturing enterprise that may locate here.

Send for circulars and pamphlets.

HOOPE & TOWNSEND,

MANUFACTURERS



**MACHINE AND CAR BOLTS,
KEYSTONE BOILER RIVETS,**

MADE IN SOLID DIES.

COLD PUNCHED, CHAMFERED, TRIMMED & DRILLED SQUARE & HEXAGON NUTS.

Bridge Rivets,

WASHERS,

Split and

Tank and Coopers'

Single (Ke's.

RIVETS.

PHILADELPHIA, PA.

ESTABLISHED IN 1865.

Richmond Locomotive & Machine Works

RICHMOND, VA.

BUILDERS OF

LOCOMOTIVES.

Standard and Narrow-Gauge, for every variety of service. Pole Road Locomotives and Cars, the only successful device of the kind made.

Stationary and Portable

ENGINES.

12 to 300 Horse-Power.

Standard and Special, 12 to 300 horse-power. Gas, Water, Creosoting and other heavy machinery. Catalogues, specifications, photographs and estimates furnished on application.

BOILERS.**STEEL RAILS****PENNSYLVANIA**

Standard Sections
Light Sections
Street Rails

Fish Plates,
Frogs, Switches

STEPHEN W. BALDWIN
SALES AGENT

16 lbs. Full Size.

STEEL COMPANY

50 to 80 lbs. per yard

16 " 45 " " "

30 " 88 " " "

Bolts & Nuts, and Crossings.

NO. 2 WALL STREET.
NEW YORK N.Y.

BUCYRUS FOUNDRY & MFG. CO.

BUCYRUS, OHIO.

Builders of

Steam Shovels,

Steam Dredges,

WRECKING CARS.

DETROIT FOUNDRY EQUIPMENT CO.

DETROIT, MICH.

MANUFACTURING

Whiting's Improved Car-Wheel Foundry Plant, Improved Cupola, Improved Overhead Steam Crane, Improved Car-Wheel Chills, Improved Transfer Trucks, Improved Device for Operating Foundry Ladles, Improved Reversible Friction Gearing.

Steam and Power Cranes Castings of all Descriptions, Ladles, &c.

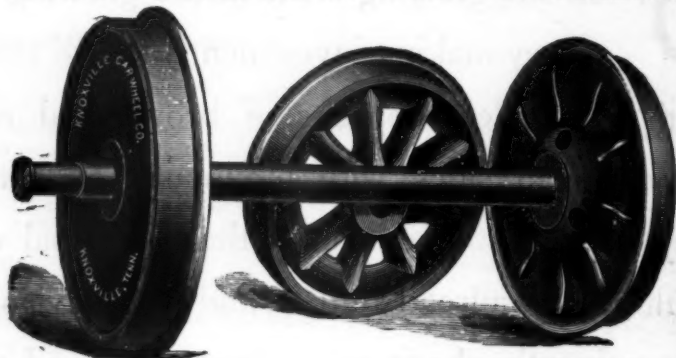
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KNOXVILLE, TENN.

Manufacturers of All Kinds of

CHILLED WHEELS

For Railroads, Street Railroad. Ore and Coal Mines, and Lumbermen.



Steam Hammers,

Steam Hoists,

Foundry Cupolas,

Derricks, Crabs,

Horse Powers,

Shieves, Drill Heads,

Gearing, Pulleys,

Bolts of all sizes,

Locomotives and Engines

Repaired and Indicated.

CORRESPONDENCE SOLICITED.

Steel and Iron Boilers,

Guild's Automatic

Boiler Cleaner,

Car and Locomotive Castings,

Soft Iron Castings of all kinds.

Heavy Castings a specialty.

Wheels mounted on Axles if

desired, with Oil Boxes

and Bolts.

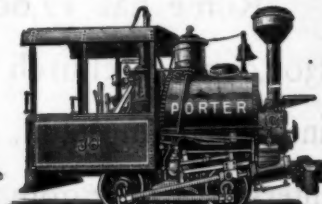
MENTION THIS PAPER.

H. K. PORTER & CO.

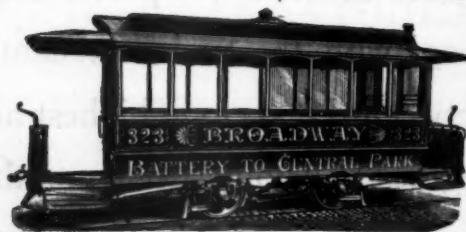
PITTSBURGH, PA.

LIGHT LOCOMOTIVES, all gauges of track, for Passenger and Freight Service, Logging Railroads, Mines, Blast Furnaces, Steel Mills, Coke Ovens, Contractor's Works, Plantations, &c.

NOISELESS STEAM MOTORS, all sizes and patterns, adapted to Steep Grades and Sharp Curves, and Noiseless and Smokeless. Cheaper, more Reliable and Efficient, and Less Objectionable than Electric or Cable Systems.



ALL WORK STEEL FITTED and built to duplicate system. EXTRA PARTS kept in Stock. MEMORANDUM.—LOCOMOTIVES AND MOTORS of several sizes, wide and narrow gauge kept on hand for immediate shipment, or under construction for quick shipment. Illustrated Catalogue, Photographs, Prices, &c., on application, mentioning this paper.

JOHN STEPHENSON COMPANY LIMITED NEW YORK

TRAMWAY CARS OF EVERY DESCRIPTION.
LIGHT, ELEGANT, DURABLE.

Railway, Mining and Furnace Supplies,

PIG IRON, COAL AND COKE.

G. HERBERT ELLERBE,

SUCCESSOR TO
MINNIGERODE & ELLERBE
P. O. Box 798.

BIRMINGHAM, ALA.

TRADE NOTES.

JEREMIAH CLARK, Lowell, Mass., dealer in cotton and woolen machinery, has moved his office from 108 Middle street to 63 Dutton street. He has on hand a full line of machinery for cotton and woolen mills, and can fill all orders promptly.

B. W. PAYNE & SONS, the engine builders of Elmira, N. Y., report quite a demand for their automatic cut-off engines for electric light purposes. This engine, made in all sizes from 10 horse-power up, is a most economical and reliable engine for any duty.

THE Schenck Belt Holter & Shifter Co. say that Southern manufacturers are wide-awake and enterprising in the matter of securing the best results from machinery, and that they are receiving numerous orders for their device for the perfect control of belts—both fast and slow running.

THE Tuerk Water Meter Co., of Syracuse, N. Y., have invented another improved hose clamp and coupler that should be examined by every fire department in the country and by the plumbing trade. They solicit correspondence with such, and would be pleased to send samples of their goods for examination.

THE La France Fire Engine & Truck Co., of Elmira, N. Y., have recently shipped two large fire engines for the Baltimore Fire Department, also one steam fire engine to Winchester, Va., and one to Suffolk, Va. The La France engines and trucks are very popular in the South and give satisfaction everywhere.

THE illustrated descriptive catalogue of **Edward P. Allis & Co.**, Milwaukee, Wis., contains much that is of interest to millers, miners, dealers in mill and engine supplies, belting, wire rope, scales, &c. Each leading article is illustrated and prices and capacity are given. Send for a copy of this catalogue and post yourself as to their specialties.

WORKSHOPS without power should correspond with the **Seneca Falls Manufacturing Co.**, of Seneca Falls, N. Y., who manufacture lathes, sawing machines, scroll saws and a full line of foot-power machinery for mechanics, carpenters and builders. These machines are not toys, but are strong and substantial and are made for actual service.

THE large demand continues for the "Chelsea scale solvent" and "valve oil," manufactured by the **Reliance Oil & Grease Co.**, Cleveland, O., and many testimonials as to the superiority of these specialties have been received by them. Those having the care of boilers and machinery would do well to write for circulars and prices when in want.

THE Fishkill Landing Machine Co., manufacturers of the celebrated Fishkill-Corliss engine, report business as very good. This firm are well-known engine builders, and their work merits the attention and patronage it attracts. The adoption of Cite's releasing valve-gear, on all engines of their manufacture, is destined to make them extremely popular.

ROBERT B. ALLEN, of the Panuca Gold & Silver Mining Co., at Candela, State of Canhuila, Mexico, says: "Our Wiswell mill not only pulverizes to the acme of perfection, but amalgamates very full, with the heaviest test, in my judgment, any mill could be put to." **J. W. Sullivan**, of Talladega, Ala., says: "The mill sold us is so satisfactory that we order another for another property." **The Wiswell Electric Mining Co.** inform us of the receipt of orders for ten mills, to be shipped in different directions, as follows: South America, North Carolina, Alabama, Colorado, New Mexico and Arizona.

T. WILLIAM HARRIS, of the firm **T. William Harris & Co.**, 44 Broadway, New York, was elected September 22d, secretary of the Pomeroy, Middleport & Syracuse Street Railway Co. This road will extend from Middleport to Syracuse, Ohio, a distance of over 10 miles, and will be built in a most thorough manner for its large freight and passenger business.

We call attention to the advertisement of **Felthousen & Sherwood**, of Buffalo, N. Y. This concern manufacture a large line of engine and boiler specialties, including all the patents of **James Jenks & Co.**, of Detroit, which were purchased by this concern last spring. They will be pleased to forward complete catalogue and quote prices of their line of specialties.

ROWLEY & HERMAN, Williamsport, Pa., have sold so many of their fast feed "Sweepstakes" planers and flooring machines in the South that there is scarcely a locality in the South where they are not to be found, and prospective purchasers of such machinery can be referred to their neighbors if they desire to know the quality and quantity of the work these machines will do.

THE Dunning patent wrought iron boilers are having a larger sale than ever this season. Nearly 14,000 are in use in all parts of the world. They are made in 11 sizes, and will thoroughly heat the smallest cottage to a large business block, church, school or public building. Any kind of fuel can be used. Write for further particulars to **New York Central Iron Works**, 77 Exchange street, Geneva, N. Y.

ROBT. EASTON, the genial superintendent of the **Williamsport Machine Co.**, Limited, and inventor of several special wood-working machines, has formed a company and is erecting a fine new plant in Williamsport, Pa., for the manufacture of wood-working machinery and doing general jobbing. The Williamsport Machine Co., Limited, have increased their facilities and will now manufacture wood-working machinery only.

MESSRS. W. D. ALLEN & Co., 151 Lake street, will hereafter have control of the Chicago branch of the **New York Belting & Packing Co.** Messrs. Allen have for a number of years done an extensive business in leather belting for the account of **Feyerweather & Ladew**, and this connection with the largest rubber belting, packing and hose manufacturers in the world, will no doubt greatly add to their influence and prosperity.

VISITORS at the Richmond (Va.) Exposition should stop and examine the handsome 50 horse-power automatic cut-off engine made by **McIntosh, Seymour & Co.**, of Auburn, N. Y. This concern have been doing a splendid business considering the short time they have been in Auburn. Quite a number of their new engines are doing fine duty in the South. Their shops at Auburn are busy turning out work at the present time.

W. A. HEATH & SON, Binghamton, N. Y., who make a specialty of special wood-working machinery for chair and furniture factories, will shortly put on the market four or five new machines that should be very popular with furniture workers, as they are a great improvement on many now in use. Messrs. Heath & Son will be pleased to correspond with furniture and chair factories who wish to learn about the new improvements.

PEDRICK & AYER, Philadelphia, Pa., are the manufacturers of the heavy **Universal** milling machine. This machine has been found very valuable by builders of locomotives, machine tool builders and general machine shops, and is meeting with a large sale. The committee on science and the arts of the **Franklin Institute**, of the State of Pennsylvania, to whom was re-

ferred for examination one of these machines, reported most favorably upon it. These machines are in satisfactory use by **Pennsylvania Railroad Co.**, **Brooks Locomotive Works**, **Inman and International Steamship Co.**, **Carlisle Manufacturing Co.**, **Carlisle, Pa.**, **L. Power & Co.**, **Philadelphia, Pa.**, and many others.

Important.

When visiting New York city, save baggage express and carriage hire, and stop at the **Grand Union Hotel**, opposite Grand Central Depot.

600 handsomely furnished rooms at \$1 and upwards per day. European plan. Elevators and all modern conveniences.

Restaurants supplied with the best. Horse cars, stages and elevated railroads to all depots. You can live better for less money at the **Grand Union Hotel** than any other first-class hotel in the city.

A GOOD turn is done our readers when we commend the **American House**, Boston. The judicious management which has rendered it so popular in the past is still continued, and no effort is spared to add to the comfort and convenience of guests.

THE BEST—First-class accommodations at **Palace Hotel**, Cincinnati, \$3 and \$2.50 per day. Elegant rooms, fine table and all conveniences.

WESTPHAL'S IMPROVED REVOLVING SCREW BOLT AND SHOT CASES. ADJUSTABLE FIRE BACKS AND LININGS FOR COOK STOVES. IRON STORM THRESHOLDS. SEND FOR ILLUSTRATED CIRCULARS. **SCHENCK'S ADJUSTABLE FIRE BACK CO.**, 94 MARKET STREET, CHICAGO.

SEND FOR HAND BOOK OF THE **CLEVELAND TARGET CO.** CLEVELAND, OHIO. Manufacturers of the **BLUE ROCK PIGEON & TRAP**, the best trap and target; **DICK'S PATENT TRAP PULL**, and **CHAMBERLAIN'S TRAP PULLING INDICATOR**.

"The Colliau" New and improved **NOT BLAST CUPOLA**, (patent, March, 1884), and **New Smokeless and Automatic Feed Boiler**, (patented 1886 in U. S.) Correspondence solicited for plans of foundries and the economical working of cupolas, the saving of fuel in melting iron and steel, and in the production of steam. Address **VICTOR COLLIAU**, Mechanical Engineer and Architect, 285 Jefferson avenue, Detroit, Michigan.

STEAM PUMPS

For every duty. Best Materials only used. Fully guaranteed and tested. It will pay you to write for prices.

HUGHES STEAM PUMP CO., CLEVELAND, OHIO. Deegan & Swift, New York Agents.



BOOKS Relating to Mechanical, Mining and Electrical Engineering. Descriptive Catalogue and information about any book sent promptly on application.

E. & F. N. SPON, 12 Cortlandt Street, NEW YORK.

JOHN WILEY & SONS, 15 ASTOR PL. New York.

Publishers of

Scientific and Industrial Works.

Send for Catalogue and Circulars—Free by mail.

SUCCESS WATER WHEEL.



This Wheel is strong and durable. Excelled all other wheels in the great trial tests. Is in use all over the nation. I also make a specialty of

Heavy Gearing and Machinery for Paper, Cotton And CRIST MILLS. **S. MORGAN SMITH**, YORK, PA.



PENBERTHY AUTOMATIC INJECTOR.

Simple, Reliable, Durable. Send for prices.

MANUFACTURED BY THE **Penberthy Injector Co.**, DETROIT, MICH.

— FOR THE BEST — **BOILER COMPOUND.** ADDRESS **THE INTERNATIONAL MFG. CO.**, 280 Pearl St., CLEVELAND, OHIO.

Pennsylvania Agricultural Works, York, Pa. Farquhar's Standard Engines and Saw Mills.

Send for Catalogue, Portable, Steam, Traction and Automatic Engines a specialty. Warranted equal to any made.



Address **A. R. FARQUHAR & SON**, York, Pa.

BRICK AND TILE MACHINERY BEST IN THE WORLD. Send for circular & prices. **J. W. PENFIELD & SON**, Willoughby, Ohio.



— For the Latest Improved — **FAST FEEDING**

Planing Mill Machinery.

ADDRESS THE

Preble Machine Works Co.,

CHICAGO, ILL.

DON'T BUY AN ENGINE OR BOILER

Until you have seen our circulars. Engines complete from 5 to 110 horse power, both Vertical and Horizontal, at prices below those of other reputable makers. 1400 in use. Boilers of every style. Automatic Engines for Electric Lights. Centrifugal Pumping Machinery for Drainage or Irrigation. Established 25 years. Perfect satisfaction guaranteed. Ask for Circular M and address

Morris Machine Works,

BALDWINVILLE, N. Y.

PERFORATED METAL FOR COTTON SEED OIL MILLS RICE MILLS MINING SCREENS & THE ROBERT AITCHISON PERFORATED METAL CO. 76 Van Buren St. Chicago, Ill.



S. OBERMAYER FOUNDRY SUPPLY MFG. CO.

Foundry Facings.

IMPORTERS OF
GRAPHITE

Or Black Lead

AND

Lubricating Plumbago.

NO CHARGE FOR TRIAL SAMPLES.

Foundry Supplies.

SHIPPERS OF ALL KINDS OF

Molding Sands

Monk's Molders' Tools.

CINCINNATI, OHIO, U.S.A.

Write for Catalogue and Price List.

The Sturtevant Patent Progressive Lumber Dry Kiln

THE OLDEST IN THE FIELD.

Complete working
drawings of KILNS
of all sizes furnished
to customers free of
charge.Send for illustrated catalogue No. 35 of Steam
Hot Blast Heating and Drying
Apparatus.

B. F. STURTEVANT, 115 PURCHASE STREET, BOSTON, MASS.

BRANCHES—115 LIBERTY STREET, N. Y., 34 N. CANAL STREET, CHICAGO.

Rubber and Leather Belting.

PAGE BELTING COMPANY,



SECTION OF COPPER WIRE-SEWED LIGHT DOUBLE BELTING.

We Manufacture
ple and special grades

Also the "HERCULES" Lacing

The Hercules Lacing

lacing; combines

Raw Hide and of

Send for Catalogue

Grades of Belting to use

MADE BY
Page Belting Co.
EXTRA.
FULLY
WARRANTEDall the sta-
of Leather Belting.

and the PATNA BRAND Lacing.

mechanically made; is a buffed

the good qualities of ordinary

Page's Patent. Try it.

No. 21, describing the "Kinds and

for Different Kinds of Work."

CONCORD, N.H., U. S. A.

The 'CHESAPEAKE'
Stitched Canvas BeltingIS THE BEST AND CHEAPEST BELT IN EXISTENCE
FOR THRESHING MACHINE, SAW MILL, OR ANY OTHER USE.

Thoroughly Waterproof and Not Affected by Temperature.

WRITE FOR PRICE LISTS, SAMPLES AND DISCOUNTS TO

THE CHESAPEAKE BELTING COMPANY,

BALTIMORE, MD.



Tuerk's Hose Clamps

The only Clamp in the market which can
be relied on to stand ANY PRESSURE with-
out getting loose or allowing the hose to leak.

The Best Thing of the Kind Ever Invented.

We also manufacture the Syracuse Water
Meter. Liberal discount to the trade.Tuerk Water Meter Co. SYRACUSE
WATER METER.

SYRACUSE, N. Y.

Send for circular.

Send for sample Clamp.

Fine Office & Bank
Fittings & WIRE WORK.
A.H. ANDREWS & CO. 198 Walnut

McShane & Bell Foundry

Fine Iron and Brass Castings Made to Order.
MANUFACTURE those celebrated
Bells for Towers,
Clocks, Church-Bells,
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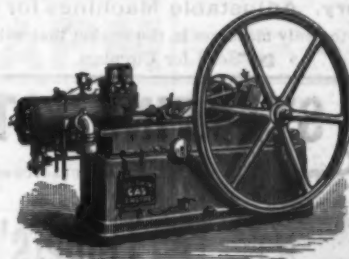
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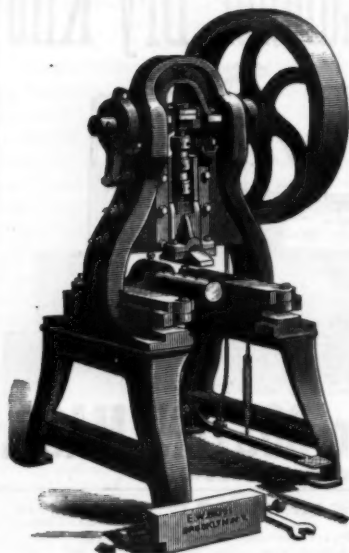
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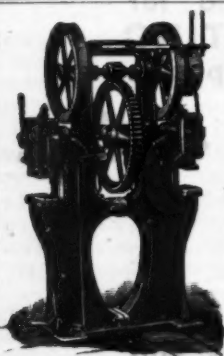


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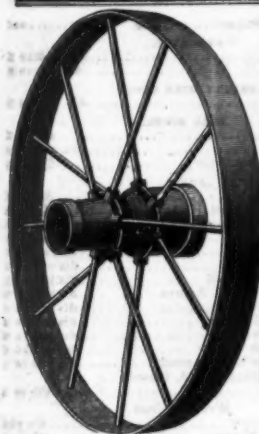
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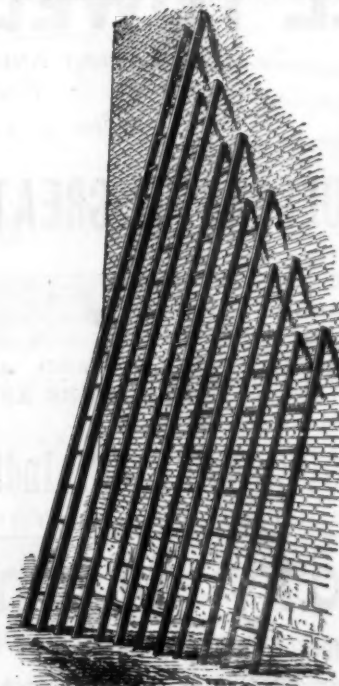
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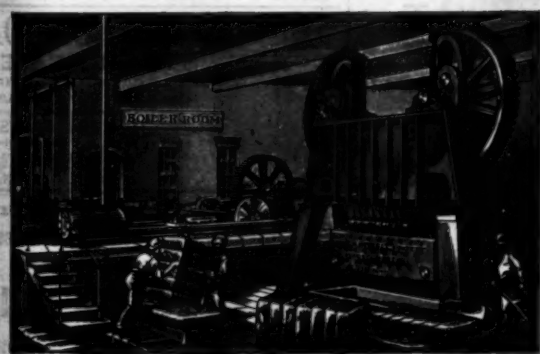
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CHAS. A. SCHIEREN & Co., New York, report recent sales of their leather link belting to the following: Erie Car Works, (Limited) Erie, Pa.; P. Lorillard & Co., Jersey City, N. J.; Standard Horse Nail Co., New Brighton, Pa.; S. S. Bent & Son, Port Chester, N. Y.; Gautier Steel Department, Johnstown, Pa.; Tingle House & Co., Glenville, Conn.; Eddystone Manufacturing Co., Eddystone, Pa.; Copperfield Mining & Smelting Co., West Fairlee, Vt.; Colchester Mills, Winooski, Vt.; O. D. Peck & Co., Buckner, Ark.; Brinkley Car Works & Manufacturing Co., Brinkley, Ark.; Geo. T. Smith Middlings Purifier Co., Jackson, Mich.; Edison United Manufacturing Co., 65 Fifth Avenue, New York City.

ANOTHER proof that crude petroleum can be now used for fuel is afforded by the introduction of oil furnaces in the extensive works of the St. Louis Shovel Co., of that city. This enterprising firm are fitting up their entire plant with oil furnaces, that the use of coal and coke may be abandoned, they having found from actual test that the use of oil will lessen the cost of fuel to at least one-third of former expenditure when coal and coke were used. To the ingenuity and skill of the Aerated Fuel Co., of Springfield, Mass., this saving in fuel is due, as from the use of their patents this desirable result is obtained. They have fitted up a number of the leading manufacturing establishments throughout the country with these furnaces, and the demand for them is still increasing.

THE attention of visitors to the Centennial Exposition, at Cincinnati, is called to the fine display of the Cincinnati Corrugating Co., in room 10, Music Hall. The exhibit consists of an iron cottage, neatly constructed of their different materials, and shows the different uses of cheapest and most durable material for fire-proof construction. Judging by the practical tests of continuous use under every kind of condition and in all parts of the country, it is claimed that "there is no roofing produced which is superior to the iron and steel plain and corrugated roofings, etc., manufactured by this company." Those contemplating improvements should address the company at 156 Eggleston Avenue, Cincinnati, Ohio.

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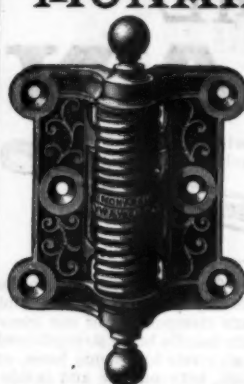
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Literary Notes.

THE Railway series of articles in Scrib-
ner's Magazine (which meets with increasing
success and the heartiest popular approval),
is continued in the October number with a
discussion of "The Railroad in its Business
Relations," by Professor Arthur T. Hadley,
of Yale, ex-commissioner of labor statistics
in Connecticut and author of the standard
work on "Railroad Transportation; its His-
tory and its Laws." He has explained with
great clearness and precision the growth of
the railway as a corporation; the evolution
of rates from the old toll system; the union
of roads and rolling stock under one man-
agement, and the consolidation of connect-
ing lines and the forming of systems. The
important parts played in this business
development by Edgar Thomson, Cornelius
Vanderbilt, Thomas Scott and John W.
Garrett (whose portraits are given) are out-
lined. Among the other features of the
article is a discussion of the relations of the
railway corporation to investors, employees
and shippers and passengers, involving the
questions of rates, pooling and government
control. Portraits of Judge Cooley, Albert
Fink and Charles Francis Adams are given
as representative men engaged in the solu-
tion of these problems.

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SKYLIGHTSMade of galvanized iron and copper. Absolu-
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are scarce and hard to get from the mills, hence our stock is much depleted, although we have ample contracts for supplies. But we can still offer buyers the advantage of a well assorted stock of over 1,000 tons. Give us a trial if you want prompt shipment.

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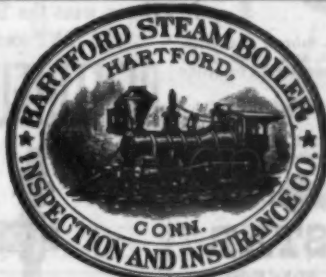
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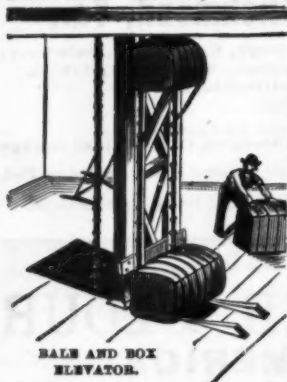
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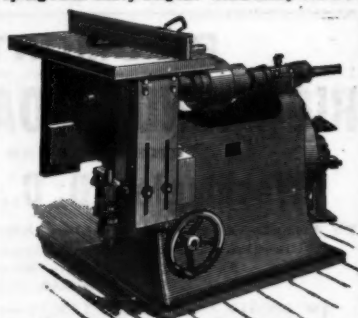


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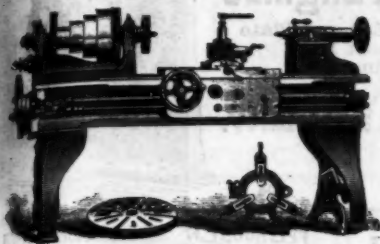
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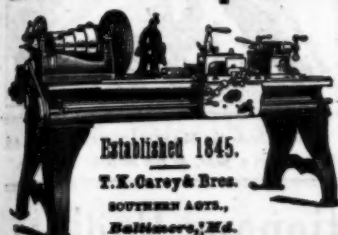
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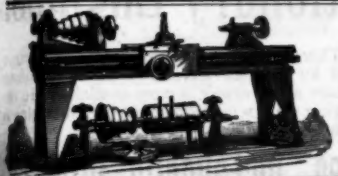
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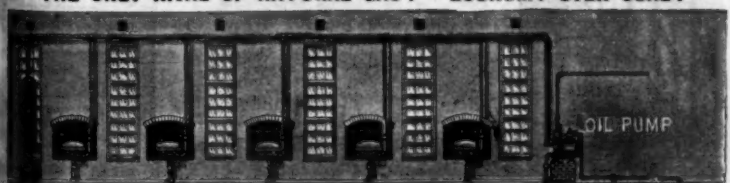
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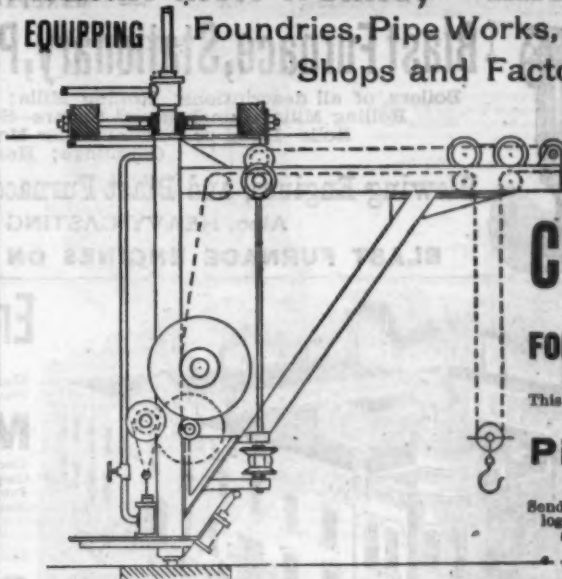
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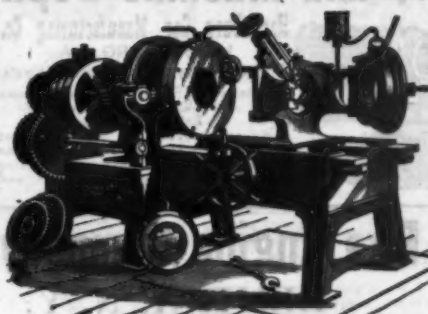
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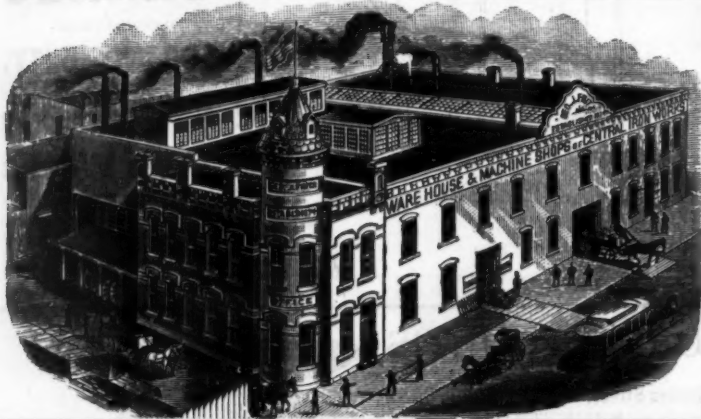
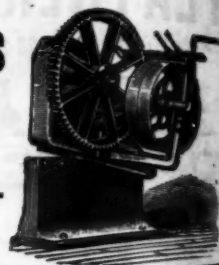
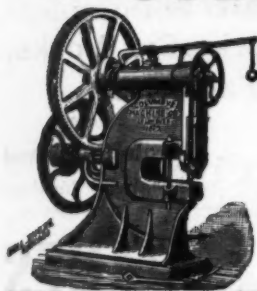
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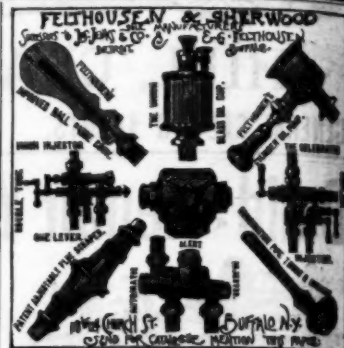
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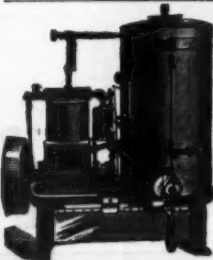
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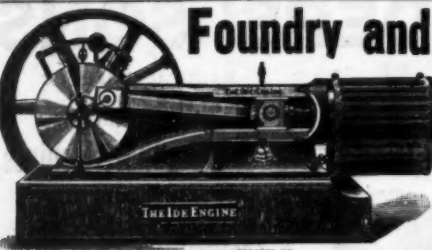
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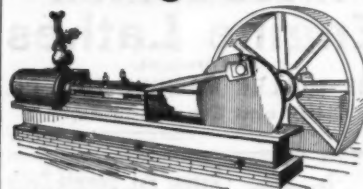
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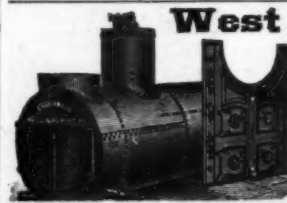
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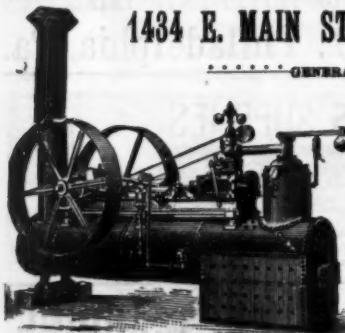
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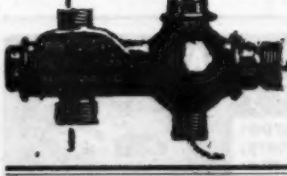
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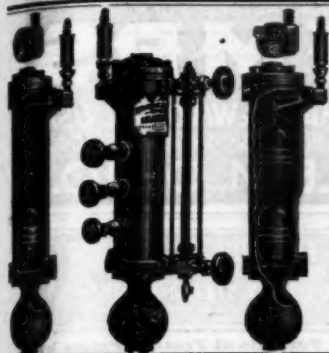
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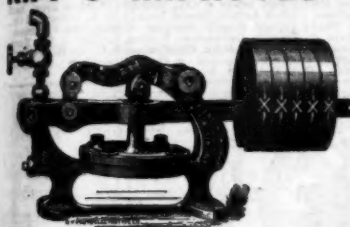
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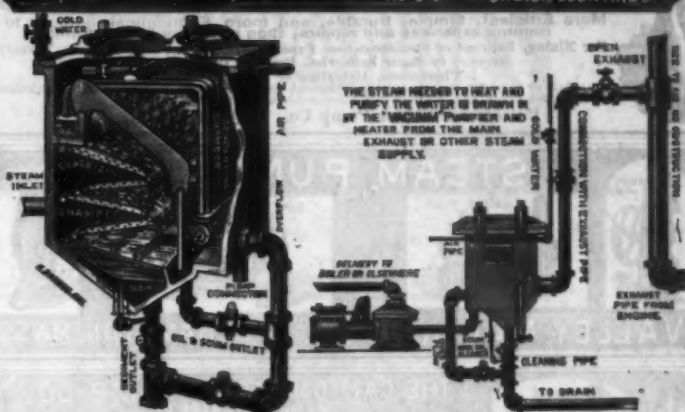
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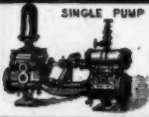
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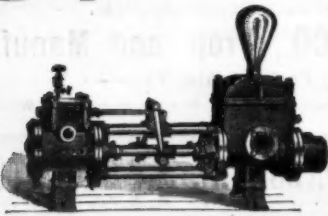
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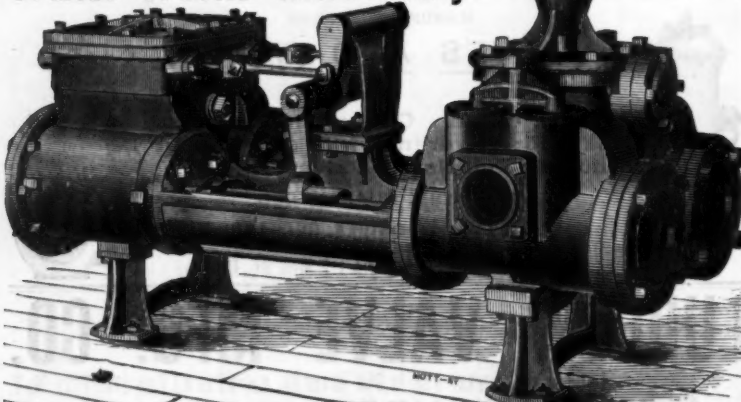
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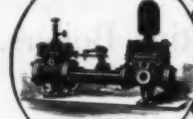
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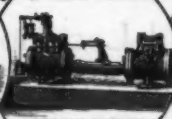
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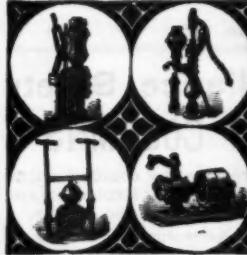


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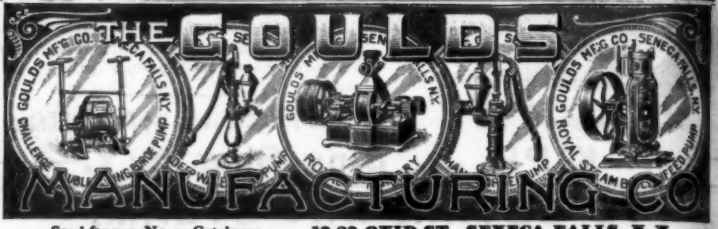
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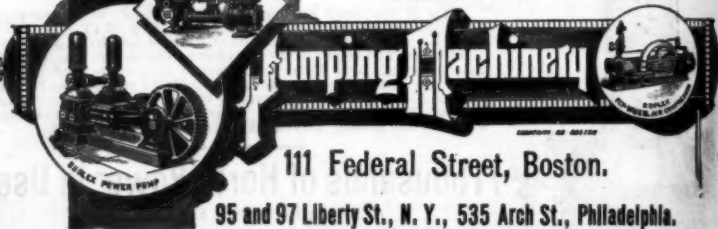


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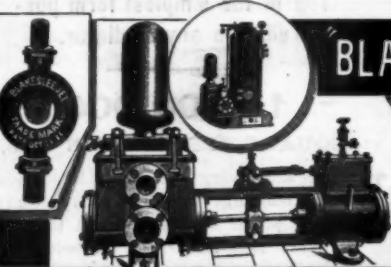
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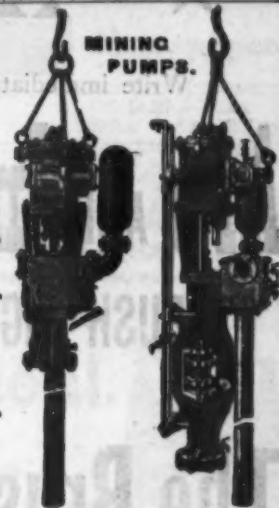


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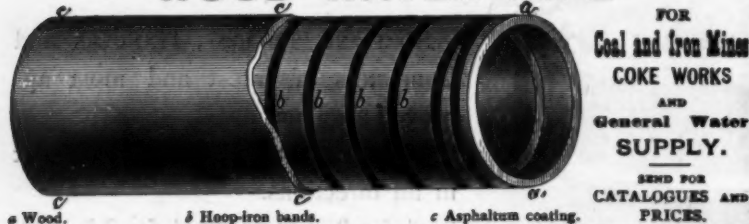
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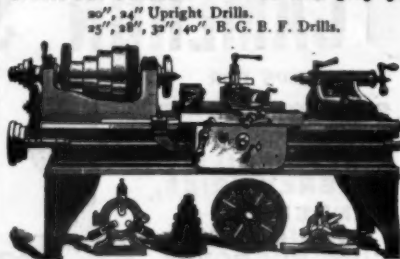
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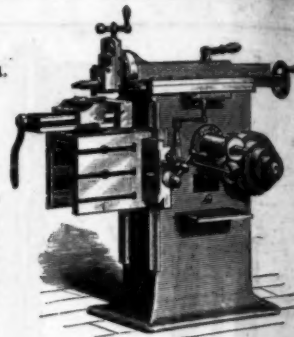
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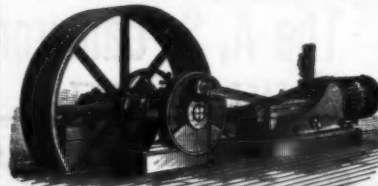
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